ARITHMETIC FOR YOUNG AMERICA

WORKBOOK IN ARITHMETIC

GRADE FOUR

NAME

Contents

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To the Teacher

The series of *Workbooks in Arithmetic*, of which this is the fourth-grade book, provide balanced, orderly practice in both skills and meanings. While the grade placement and sequence of topics are the same as those of the authors' textbooks, *Arithmetic for Young America*, the workbooks are planned so they may be used with any modern course of study to supplement text or other class instruction.

The teacher will find these books economical both of her time and of the pupils' time. They contain a great variety of interesting practice material. They employ a wider range of sensory experience than can be provided in a textbook — experiences such as drawing, coloring, measuring, grouping, matching, tabulating, dealing out, labeling, and the like. They provide effective new methods and devices for relearning, for extending meanings, for improving skills.

This fourth-grade workbook stresses the meaning of the four fundamental processes, with special emphasis upon their application in problem solving. The development of number sense is a primary aim of the book. Charts, diagrams, and illustrations are generously provided in the book to help children form a clear mental picture of the numerical relationships in a problem situation. The pupils are helped to make their own rules and generalizations for the solution of many important types of problems. The problems themselves are high in interest value, have a genuine social significance, and are phrased simply and concisely.

Careful attention has been given to the layout of pages, and especially to providing generous space for the pupil to record responses. The teacher should emphasize with the class the importance of neatness, legibility, and orderliness, as well as accuracy in the use of arithmetic workbooks. Pupils should learn to *think* and to be reasonably certain before they write. One outcome of the use of workbooks should be the development on the part of children of a sense of pride in the continuous written record of their thinking.

To obtain most effective results from the use of these workbooks, the authors urge that the teacher check the pupils' work frequently, giving attention both to accuracy of arithmetic computation and understanding of processes.

WORKBOOK IN ARITHMETIC: GRADE FOUR. By John R. Clark and Caroline Hatton Clark

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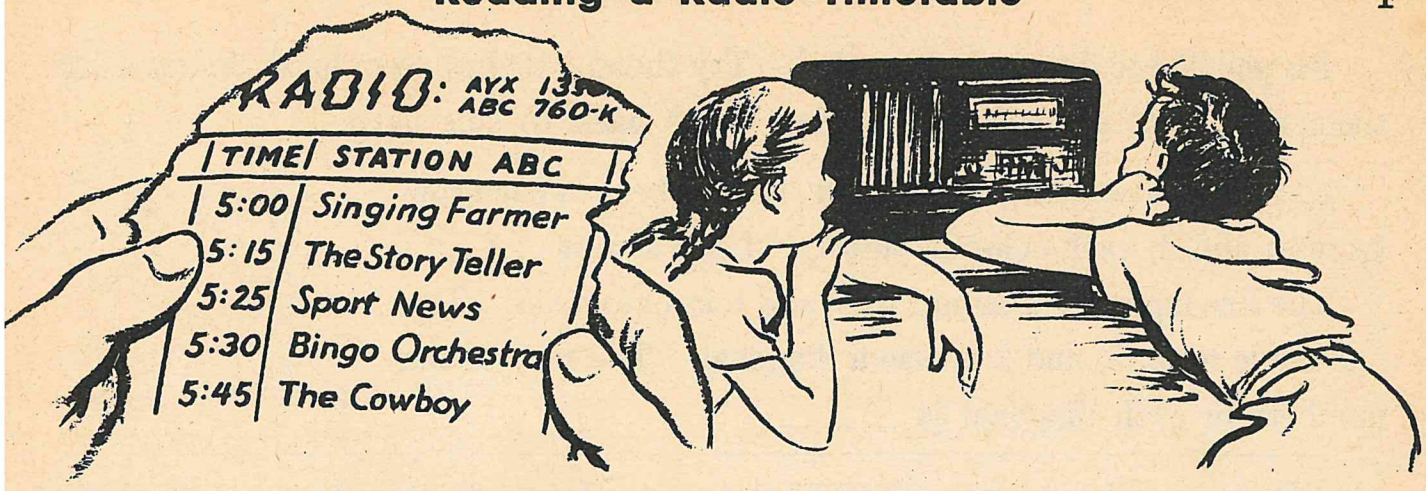
WA : GR. 4-1

Reading a Radio Timetable



A part of today's radio program on Station ABC is shown above.

1. The Singing Farmer comes on the air at _____ o'clock.

2. The Story Teller comes on at *quarter* _____ five.

3. Sport News comes on at _____ minutes _____ five.

4. The Bingo Orchestra comes on at *half* past _____.

5. The Cowboy comes on at quarter _____ six.

6. 7:20 is _____ min. _____ 7.

7. 8:35 is ____ min. before ____.

8. 10:45 is ____ min. before ____.

9. 1:18 is _____ min. after _____.

10. 1:55 is _____ min. _____ 2.

11. 2:50 is ____ min. before ____.

12. 2:59 is ____ min. before ____.

13. 3:30 means *half* past _____.

14. 4:05 is _____ min. after _____.

15. Learn the facts in the table below.

60 seconds (sec.) = 1 minute (min.)
60 minutes (min.) = 1 hour (hr.)
24 hours (hr.) = 1 day (da.)

16. From 3 o'clock to 4 o'clock is _____ hour, or _____ minutes.

17. From 9:00 A.M. to noon is _____ hours.

18. From noon to 4:00 P.M. is _____ hours.

19. From 9:00 A.M. to 4:00 P.M. is _____ hours.

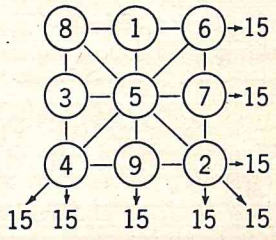
20. The movies start at 2:15. It takes Ann 10 minutes to walk from her home to the movies. She should leave home at _____ minutes after _____.

Number Puzzles

Do you like to do number puzzles? Try these. If they seem hard, do not work them now. Do pages 3 to 5. Then come back to this page.

1. Here is a *magic square.* Add the numbers in each row (across) and in each column (down). Each sum is _____.

The line made by numbers 4, 5, and 6 is a *diagonal.* The line made by 8, 5, and 2 is also a diagonal. The sum of the numbers in each diagonal is _____.



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2. Here is another magic square.

4	9	8
11	7	3
6	5	10

Add the numbers in each row (across). The sums are _____, _____, _____.

Add the numbers in each column (down). The sums are _____, _____, _____.

Add the numbers in each diagonal. The sums are _____, _____.

3. Another magic square!

9	4	11
10	8	6
5	12	7

Add the numbers in each row. The sums are _____, _____, _____.

Add the numbers in each column. The sums are _____, _____, _____.

Add the numbers in each diagonal. The sums are _____, _____.

4. In a magic square, is the sum of the numbers in each row, column, and diagonal, always the same? _____

5. Roy says this number square is a magic square. Betty says it isn't.

2	7	6
9	5	1
4	3	10

Add the numbers in each row. The sums are _____, _____, _____.

Add the numbers in each column. The sums are _____, _____, _____.

Add the numbers in each diagonal. The sums are _____, _____.

Who is right, Roy or Betty? _____

6. Add the numbers in each row of this square. The sums are _____, _____, _____, _____.

16	2	3	13
5	11	10	8
9	7	6	12
4	14	15	1

Add the numbers in each column. The sums are _____, _____, _____, _____.

Add the numbers in each diagonal. The sums are _____, _____.

Is the square a magic square? _____

93
5 min.

Test on Addition Facts

Write the answers to these additions in 4 minutes. Make and study Help-Yourself Cards for any facts you do not know. Then take this test again.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*
1.	7	2	2	2	4	4	3	7	2	6	5
	1	9	5	8	4	1	1	7	0	1	4
	8	11	7	10	8	5	4	14	2	7	9
2.	1	9	1	2	2	5	0	0	7	6	0
	1	2	7	1	2	5	7	1	2	2	4
	2	11	8	3	4	10	0	0	9	8	0
3.	0	2	3	4	8	6	4	9	5	6	3
	2	4	0	5	2	4	0	1	0	6	2
	2	6	3	9	10	10	4	10	5	12	5
4.	9	0	6	3	3	3	7	2	8	4	8
	3	6	5	8	4	9	3	7	4	8	0
	12	0	11	11	7	12	10	9	12	12	8
5.	5	0	0	5	7	8	7	5	5	7	8
	2	3	5	1	0	5	9	8	7	8	7
	7	0	0	6	7	13	16	13	12	15	15
6.	5	8	8	9	9	6	0	5	4	7	1
	9	9	6	5	4	7	0	6	6	6	8
	14	17	14	13	13	13	0	11	10	13	9
7.	1	5	1	9	8	1	2	6	6	3	6
	2	3	5	0	8	3	3	8	9	5	3
	3	8	6	9	16	4	5	14	13	8	9
8.	0	8	9	3	4	4	0	6	8	7	4
	9	1	8	7	7	2	8	0	3	5	9
	0	9	17	10	11	6	0	6	11	12	13
9.	3	7	4	3	1	2	9	9	9	1	1
	3	4	3	6	9	6	9	6	7	4	6
	6	11	7	9	10	8	18	15	16	5	7

Instruction in making and using Help-Yourself Cards is given in *Arithmetic for Young America, Grade Four.*

Most teachers prefer to have the pupils use folded paper when taking this test. In this way the page may be used again many times when the pupils are directed later in the book to come back to it for retesting.

Addition Practice

1. $12+5=$ _____ $13+6=$ _____
2. $22+2=$ _____ $31+7=$ _____
3. $35+4=$ _____ $41+8=$ _____
4. $20+5=$ _____ $54+3=$ _____
5. $17+4=$ _____ $35+6=$ _____
6. $28+6=$ _____ $48+7=$ _____
7. $34+9=$ _____ $12+9=$ _____
8. $26+7=$ _____ $43+7=$ _____
9. $40+30=$ _____ $30+60=$ _____
10. $50+20=$ _____ $50+30=$ _____

---

11. $3+4+5=$ _____ $6+7+3+5=$ _____ $6+9+6+2=$ _____
12. $7+4+9=$ _____ $5+8+4+6=$ _____ $7+5+7+4=$ _____

Add down. Check by adding up.

13.

4	5	4	2	4
3	7	6	8	7
2	5	3	7	5

14.

4	5	8	4	9
7	6	6	3	6
0	3	2	5	5
2	4	1	8	4

15.

23	53	48	75
34	46	30	23

16.

98	47	53	94
21	60	82	72

17.

46	38	28	69
87	74	43	58
95	56	75	47

18.

$.35	$.27	$.47	$.21
.46	.63	.96	.80
.98	.48	.83	.97

19.

47	42	32	46
86	87	67	35
93	30	21	23
21	52	9	5

20.

426	283	76	204
384	42	347	95
75	389	86	98

21.

$.75	$.74	$.36	$.43
.87	.82	.27	.57
.03	.37	.04	.95
.96	.28	.21	.82

22.

$4.76	$9.56	$3.22
.83	2.48	.27
.24	.75	.95

23.

$6.21	$9.56	$2.28
2.43	2.48	.79
8.27	3.75	.64

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*
1.	26	17	63	94	58	48	69	74
	87	86	22	30	76	42	51	59
	94	45	97	18	35	36	70	83
2.	99	6	75	10	54	78	64	29
	81	93	27	46	10	93	55	17
	62	89	84	35	30	72	34	86

3.	$1.23	$2.73	$1.92	$4.45	$7.21	$9.87	$7.65
	5.05	.94	5.18	.39	3.19	6.32	.44
	.37	7.89	1.23	5.08	6.67	8.26	8.53

4. $2.45 + $3.72
5. $1.98 + $.08
6. $3.46 + $.75
7. $2.35 + $1.76
8. $3.47 + $5 + $2.38
9. $4.63 + $6 + $.75
10. $5.89 + $2 + $3
11. $4.37 + $.15 + $5

4.	5.	6.	7.
8.	9.	10.	11.

12. One of Dorothy's muffin tins holds 9 muffins. The other one holds 8 muffins. When Dorothy fills both tins, she can bake _____ muffins at the same time.

13. Tony made 6 boats. Larry made 7. Together they made _____ boats.

14. In a ringtoss game Don made scores of 9, 5, 3, and 4. His total score was _____.

15. Mary practiced her music lesson 15 minutes this morning and 20 minutes at noon. In all she practiced _____ minutes.

Number Puzzles

If these puzzles seem hard, first do pages 7 to 10.

Here is a tricky trick!

➡ Write any 3-figure number, using 3 different figures: ⟶ 573

➡ Write the same number backward: ⟶ − 375

➡ Subtract: ⟶ 198

➡ Write your answer backward: ⟶ + 891

➡ Add. The sum is: ⟶ 1089

Try the above trick, using the numbers in the boxes below. Each answer should be 1089.

1.	986	834	793
	− _____	− _____	− _____
	+ _____	+ _____	+ _____
Ans.			
2.	632	952	571
	− _____	− _____	− _____
	+ _____	+ _____	+ _____
Ans.			

Sue can write the answers to Exs. 3 to 7 in about a minute. You can do it, too, if you see what the trick is.

3. $9 + 7 - 7 =$ _____

4. $25 + 16 - 16 =$ _____

5. $134 - 98 + 98 =$ _____

6. $54 + 35 - 54 =$ _____

7. $256 + 178 - 178 =$ _____

Some of the numbers in these subtractions are missing. A box is drawn where the number should be. Write the missing number in each box.

8.	9□ − 54 = 42	28□ − 196 = 84	47□ − 286 = 193
9.	7□ − 46 = 25	4□8 − 264 = 184	8□ − 27 = 58
10.	1□8 − 63 = 65	□3 − 35 = 38	3□2 − 175 = 217

11. Joan calls this subtraction a *mystery subtraction*. It's a mystery to her because each of the figures from 1 to 9 has been used just once in the example. Do these subtractions. Are they mystery subtractions? _____

981
− 746
235

12.	819 − 352 =	657 − 219 =	576 − 384 =

Notice in Exs. 1 and 2 that the 3-figure number chosen must always have a larger digit in the hundreds place than in the units place.

Test on Subtraction Facts

Write the answers to these subtractions in 5 minutes. Make and study Help-Yourself Cards for any facts you do not know. Then take this test again.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*
1.	8 − 0 = 8	2 − 0 = 2	9 − 7 = 2	9 − 4 = 5	4 − 0 = 4	14 − 9 = 5	13 − 4 = 9	15 − 9 = 6	17 − 8 = 9	15 − 7 = 8	13 − 9 = 4
2.	16 − 7 = 9	13 − 7 = 6	12 − 3 = 9	15 − 6 = 9	14 − 8 = 6	12 − 5 = 7	12 − 7 = 5	11 − 4 = 7	11 − 6 = 5	12 − 9 = 3	10 − 5 = 5
3.	8 − 4 = 4	6 − 5 = 1	7 − 5 = 2	6 − 4 = 2	16 − 9 = 7	14 − 5 = 9	17 − 9 = 8	4 − 2 = 2	6 − 6 = 0	10 − 9 = 1	14 − 7 = 7
4.	13 − 8 = 5	11 − 3 = 8	14 − 6 = 8	8 − 2 = 6	10 − 4 = 6	9 − 6 = 3	5 − 5 = 0	16 − 8 = 8	18 − 9 = 9	8 − 6 = 2	11 − 2 = 9
5.	10 − 3 = 7	6 − 1 = 5	2 − 1 = 1	5 − 2 = 3	6 − 3 = 3	3 − 1 = 2	7 − 1 = 6	4 − 3 = 1	9 − 8 = 1	4 − 4 = 0	9 − 1 = 8
6.	5 − 3 = 2	5 − 4 = 1	1 − 1 = 0	3 − 3 = 0	3 − 2 = 1	7 − 7 = 0	5 − 1 = 4	0 − 0 = 0	3 − 0 = 3	5 − 0 = 5	8 − 8 = 0
7.	7 − 3 = 4	6 − 0 = 6	9 − 0 = 9	7 − 2 = 5	12 − 6 = 6	10 − 1 = 9	6 − 2 = 4	10 − 2 = 8	7 − 6 = 1	9 − 5 = 4	8 − 7 = 1
8.	11 − 7 = 4	13 − 6 = 7	15 − 8 = 7	8 − 5 = 3	11 − 5 = 6	11 − 8 = 3	9 − 2 = 7	12 − 4 = 8	10 − 8 = 2	7 − 4 = 3	12 − 8 = 4
9.	13 − 5 = 8	10 − 6 = 4	7 − 0 = 7	10 − 7 = 3	9 − 9 = 0	9 − 3 = 6	4 − 1 = 3	11 − 9 = 2	8 − 3 = 5	2 − 2 = 0	8 − 1 = 7

See notes on page 3.

Subtraction Practice

1.	18 − 3 = _____	29 − 4 = _____	67 − 63 = _____	40 − 36 = _____
2.	47 − 1 = _____	58 − 4 = _____	21 − 16 = _____	32 − 27 = _____
3.	39 − 3 = _____	67 − 5 = _____	60 − 54 = _____	71 − 64 = _____
4.	45 − 2 = _____	59 − 7 = _____	53 − 49 = _____	29 − 24 = _____
5.	65 − 9 = _____	37 − 9 = _____	51 − 45 = _____	22 − 18 = _____
6.	27 − 8 = _____	54 − 5 = _____	26 − 21 = _____	53 − 48 = _____
7.	63 − 5 = _____	81 − 3 = _____	47 − 40 = _____	60 − 56 = _____
8.	46 − 9 = _____	72 − 8 = _____	41 − 35 = _____	77 − 72 = _____
9.	60 − 20 = _____	160 − 80 = _____	86 − 81 = _____	48 − 42 = _____
10.	70 − 30 = _____	120 − 40 = _____	20 − 14 = _____	33 − 28 = _____
11.	90 − 60 = _____	130 − 70 = _____	37 − 32 = _____	39 − 36 = _____
12.	80 − 10 = _____	140 − 50 = _____	52 − 47 = _____	58 − 54 = _____

Subtract and check.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*
13.	98 53	76 34	85 52	74 60	72 59	87 78	75 63	84 57
14.	564 238	382 157	765 239	473 448	715 260	328 163	401 381	539 375
15.	812 475	734 285	956 178	734 397	500 286	300 198	400 375	800 167
16.	400 287	500 382	700 376	800 192	400 321	900 856	400 189	600 590

Subtraction Practice

Subtract and check.

1.	170 82	190 84	180 93	160 57
2.	246 83	465 92	530 64	287 56
3.	387 29	460 87	563 98	234 72
4.	$.89 .75	$.37 .28	$.46 .39	$.57 .48
5.	$.98 .79	$.86 .47	$.65 .58	$.79 .33
6.	$1.70 .80	$1.60 .80	$1.10 .30	
7.	$4.78 2.63	$5.74 1.30	$6.05 2.04	
8.	$1.20 .70	$8.70 3.50	$2.24 1.98	

9.	$3.87 .93	$4.67 .39	$5.76 .78
10.	$6.75 1.87	$5.43 2.76	$6.32 1.78
11.	$2.75 1.36	$4.87 1.97	$5.68 1.99
12.	$7.80 1.69	$4.70 1.83	$2.20 1.96
13.	$7.05 3.87	$4.06 3.85	$3.09 1.89
14.	$7.00 2.47	$3.00 1.89	$7.00 6.59
15.	$9.00 2.46	$7.00 4.73	$6.00 2.47
16.	$7.06 2.87	$6.00 2.95	$7.00 .86

Subtraction Practice

Write your work in the boxes below.

1. 100 less 37 = _____.
2. 76 subtracted from 123 = _____.
3. 237 is _____ more than 198.
4. 67 and _____ make 115.
5. 287 minus 96 equals _____.
6. 525 from 750 equals _____.
7. 137 is _____ less than 200.
8. When 65 is taken from 80, _____ is left.
9. 40 plus _____ equals 60.
10. $9.00 – $4.36 = _____
11. $6.07 – $2.84 = _____
12. Peter has 98¢. If he spends 45¢, how much will he have left? _____
13. Grace has $2.50. She wishes to buy a sweater for $3.75. How much more money does she need? _____
14. There are 34 children in the third-grade class. There are 31 children in the fourth-grade class. How many more children are there in the third grade than in the fourth grade? _____
15. Of the 31 children in the fourth grade 17 are boys. There are _____ girls in the class.

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.

Large Numbers

1. $200 + 80 + 4 =$ _____
2. $3{,}000 + 500 + 60 + 2 =$ _____
3. $12{,}000 + 300 + 50 + 6 =$ _____
4. $25{,}000 + 70 + 4 =$ _____
5. $37{,}000 + 300 + 10 =$ _____

Read these numbers.

6.	7,245	6,408	2,400
7.	5,067	8,924	6,008
8.	15,642	35,028	37,047
9.	17,986	23,478	25,003

Write the missing numbers.

10.	300	400	500	_____	_____	_____	_____	1,000
11.	350	400	450	_____	_____	_____	_____	700
12.	850	900	950	_____	_____	_____	_____	1,200
13.	797	798	799	_____	_____	_____	_____	804
14.	997	998	_____	_____	_____	_____	_____	1,004
15.	1,003	1,004	_____	_____	_____	_____	_____	1,010

16. 7 dollars, 8 dimes, and 5 pennies = _____ cents

17.	$750 + 10 =$ _____	$872 + 10 =$ _____	$653 + 100 =$ _____
18.	$890 + 10 =$ _____	$790 + 10 =$ _____	$790 + 100 =$ _____
19.	$580 + 10 =$ _____	$580 + 100 =$ _____	$580 + 1000 =$ _____

20. Place the commas in these numbers: 6 7 2 3 4 0 0 8 1 4 2 6 7 3 5 0 8 4

21. Your teacher will dictate some numbers for you to write below.

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

Number Puzzles

Try these number puzzles. If they seem hard, do not work them now. Do pages 13 to 16. Then come back to this page.

1. In this row of numbers each number with a line around it is 2 times the number before it. 6 (12) 7 3 5 (10) 3 8 (16) 4 7

The 12 has a line around it because $12 = 2 \times 6$.

The 10 has a line around it because $10 = 2 \times$ _____.

The 16 has a line around it because $16 = 2 \times$ _____.

2. Find each number which is 2 times the number before it. Draw a line around it. 1 2 5 10 3 4 8 6 16 7 14 6 5

3. Find each number which is 3 times the number before it. Draw a line around it. 2 7 14 0 1 3 7 21 9 27 2 6 8

4. Find each number which is 5 times the number before it. Draw a line around it. 3 15 6 30 3 4 20 15 25 8 40

5. Carl looked at this multiplication and told the correct answer in half a minute. You can do it, too. $7 \times 6 \times 4 \times 3 \times 8 \times 9 \times 2 \times 5 \times 0 =$ _____

Some of the numbers in these multiplications are missing. A box is drawn where the number should be. Write the missing number in each box.

6.

3□	1□	23□	5□2	42□	346
×4	×4	×9	×6	×7	×□
124	64	2106	3252	2940	1730

7.

□00	2□4	37□	□63	475	□43
×4	×5	×4	×3	×□	×8
3200	1270	1492	2289	1425	1944

A Test on Multiplication Facts

Write the answers to these multiplications in 5 minutes. Make and study Help-Yourself Cards for any facts you do not know. Then take this test again.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*
1.	4	1	0	6	1	5	2	8	8	4
	5	4	3	3	8	9	6	0	3	2
2.	4	8	9	9	7	0	6	5	1	2
	0	1	2	5	2	8	4	1	9	9
3.	3	2	4	1	1	2	9	0	5	7
	8	4	6	5	6	7	0	9	2	4
4.	9	5	6	8	9	2	6	1	2	3
	1	6	1	2	3	5	5	7	8	9
5.	2	1	3	5	0	4	7	0	4	4
	1	0	3	7	4	7	1	6	3	9
6.	5	5	1	0	5	8	7	2	7	3
	5	8	2	1	0	4	5	2	3	1
7.	2	3	0	4	3	3	4	1	0	5
	0	4	5	8	6	2	4	3	2	3

Multiplication Pictures

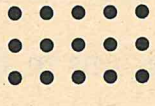
Each of these dot pictures tells two multiplication facts. Write the facts under the picture.

3 × 2 = 6

2 × 3 = ___

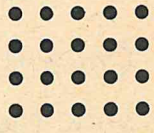
___ × ___ = ___

___ × ___ = ___



___ × ___ = ___

___ × ___ = ___



___ × ___ = ___

___ × ___ = ___

For the test, see notes on page 3.

Multiplying

1. Six 5-cent cones cost _____¢.

2. A card of buttons has 3 rows of buttons with 4 buttons in a row. All together there are _____ buttons.

3. Gumdrops come 6 to the package. Jack bought 3 packages. He got _____ gumdrops.

4. 7 nickels = _____ cents.

5. 1 yd. = 3 ft.; 2 yd. = ____ ft.

6. Six 4-cent bananas cost _____¢.

7. Eight 3-cent stamps cost _____¢.

8. Jean wants to hang 6 pairs of socks on the clothesline. To have a clothespin for each sock, she needs _____ clothespins.

9. In a classroom there are 4 rows of seats with 6 seats in a row. In all there are _____ seats.

Multiplying without Carrying

1. Dan needed to find the cost of 3 books at $.23 each.

Dan thought, "If 1 book costs $.23, 3 books will cost 3 times $.23, or _____."

$.23
× 3
$.69

Explain the work in the box. It shows how to find 3 times $.23.

2. Tell how each of these multiplications is done.

$.51	$5.00	$4.03
6	4	3
$3.06	$20.00	$12.09

3. Cover the multiplications in Ex. 2 and work the same examples below.

$.51	$5.00	$4.03
6	4	3

Multiply. Check by going over your work.

4.	42 × 3	40 × 5	22 × 4	$.12 × 3
5.	62 × 3	50 × 4	70 × 3	$.13 × 3
6.	203 × 3	234 × 2		$4.11 × 3
7.	402 × 3	501 × 4		$3.04 × 2
8.	400 × 4	720 × 3		$4.21 × 4
9.	500 × 3	403 × 3		$4.00 × 2

Multiplying with Carrying

1. Martha wants to buy 4 hair bows that cost $.23 apiece.

She thought, "If 1 bow costs $.23, 4 bows will cost 4 × $.23, or _____."

$.23
4
$.92

The work in the box shows how to find 4 times $.23. Explain the multiplication.

2. Tell how each of these multiplications is done.

114 5 570	$3.25 7 $22.75	$3.07 3 $9.21

3. Cover the multiplications above and do the same examples in the boxes below.

114 5	$3.25 7	$3.07 3

Multiply. Check by going over your work.

4.	26 5	34 6	57 2	43 6
5.	35 9	38 2	39 4	35 7
6.	35 6	43 7	96 2	85 5
7.	62 5	43 8		97 3
8.	342 6	789 2		$1.09 5
9.	135 3	704 3		$2.17 5
10.	693 5	840 5		$6.75 4
11.	325 8	837 4		$2.14 8
12.	514 7	608 5		$8.75 2
13.	320 7	693 4		$3.02 8
14.	569 3	748 3		$1.13 9
15.	234 9	805 4		$5.67 5
16.	697 4	345 8		$6.48 4

Multiplication Practice

1.	42 × 2	61 × 5	40 × 6	$.87 × 2
2.	43 × 6	35 × 9	80 × 2	$.90 × 5
3.	89 × 4	45 × 7	43 × 7	$.76 × 2
4.	615 × 5	702 × 5		$1.23 × 8
5.	432 × 9	867 × 3		$8.04 × 4
6.	613 × 4	402 × 7		$4.09 × 3
7.	728 × 3	314 × 7		$1.14 × 8
8.	167 × 4	728 × 5		$4.15 × 4
9.	368 × 4	785 × 3		$8.67 × 5

Use the boxes below for your work on these problems.

10. Three tennis balls at $.49 each will cost _____.

11. Sue wants to make 4 curtains. She needs 32 inches of material for each curtain. For the 4 curtains she needs _____ inches of material.

12. Alice has a sheet of stamps. There are 8 stamps in a row. There are 4 rows. She has _____ stamps.

13. Four airplane tickets at $3.06 each would cost _____.

14. Jean bought 2 boxes of paper handkerchiefs. There were 120 handkerchiefs in each box. In all she bought _____ handkerchiefs.

15. 5 doz. cookies is _____ cookies.

10.	11.	12.
13.	14.	15.

Measures of Length

1. Guess the length of some long things and some short things in your classroom. Then measure the things with a ruler or a yardstick. Write down your guess and the measured length.

Thing Measured	Guess	Real Length

2. Be sure you know these facts.

12 inches (in.) = 1 foot (ft.)
3 feet (ft.) = 1 yard (yd.)
36 inches (in.) = 1 yard (yd.)

3. Draw lines between the equal lengths. One is done for you.

1 ft. 2 in.	40 in.
1 yd. 4 in.	12 in.
1 yd.	14 in.
1 ft.	3 ft.
2 ft.	24 in.

Draw a line around the sensible answer to each question below.

4. How long is Harry's pencil?
7 in. 7 ft.

5. How tall is a 9-year-old boy?
7 ft. 57 in.

6. Bob says he is 62 inches tall. Mary says she is 5 ft. tall. Who is taller? _____

7. Mary measured and found she needs 68 inches of binding for an apron. She has a package of binding marked "Length: 2 yd." Has Mary enough binding for the apron? _____

8. Ted measured with a yardstick and found he will need 4 yards of electric-light cord to fix the lamp in his room. The cord is sold by the foot. Ted should buy _____ feet.

6.	7.	8.

Problem Test I

1. Lester charges $.35 for washing a dog. Last week he washed 3 dogs. He earned $1.05.

2. How much will John have left from $1.75 if he spends $.69 for a kite? $1.06

3. How much will Tom have to pay for 2 harmonicas at $1.98 each? $3.96

4. Peter caught a fish that was 1 ft. 8 in. long. The fish was 20 in. long.

5. Molly wants to buy a pup that costs $5.00. She has $3.27. How much more money does she need? $1.73

6. Larry bought a book for $.60, a pencil for $.08, an eraser for $.05, and a bottle of ink for $.15. What was his total bill? $.88

7. George weighs 56 pounds. Charles weighs 61 pounds. Charles weighs 5 pounds more than George.

8. Mary has 8 nickels to change into pennies. How many pennies will she get? 40

9. How many feet are there in 4 yards? 12

10. John earned $.65 last week and $.45 this week. How much did he earn in the two weeks together? $1.10

WORK SPACE

1. $.35 × 3 = $1.05	2. $1.75 − .69 = $1.06
3. $1.98 × 2 = $3.96	4. 12 + 8 = 20
5. $5.00 − 3.27 = $1.73	6. $.60 + .08 + .05 + .15 = $.88
7. 61 − 56 = 5	8. 8 × 5 = 40
9. 3 × 4 = 12	10. $.45 + .65 = $1.10

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

If a child has 10 answers correct, have him draw a line under "excellent"; if 8 or 9 answers correct, have him draw a line under "good"; and so on.

Review Practice

Count by 1's. Write the numbers.

1. 1,946 _____ _____ _____ _____ 1,951

2. 13,087 _____ _____ _____ _____ 13,092

3. 75,996 _____ _____ _____ _____ 76,001

4.

46	456	$4.76
75	203	8.32
87	847	4.50

5.

76	683	$4.97
83	200	.65
92	478	2.83

6.

43	530	$3.79
87	280	6.00
62	957	8.34
54	603	5.00

Subtract and check.

7.

976	346	839
658	215	275

8.

547	807	600
286	298	347

9.

800	900	467
462	384	205

Multiply. Check by going over your work.

10.

768	214	$5.04
3	7	8

11.

879	542	$5.00
3	7	6

12.

504	342	$6.74
9	8	4

13. $1.24 + $3 + $4.29 = _____

14. $3.46 from $6.75 is _____

15. 6 × $5.03 = _____

16. 700 is _____ more than 246.

17. What number is 37 more than 72? _____

18. 6 × 245 = _____

13.	14.	15.
16.	17.	18.

Review Practice

1.
$$\begin{array}{r} 46 \\ 75 \\ 83 \\ 21 \\ \hline \end{array} \qquad \begin{array}{r} 47 \\ 38 \\ 25 \\ 46 \\ \hline \end{array} \qquad \begin{array}{r} \$4.75 \\ 8.32 \\ 2.49 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 478 \\ -239 \\ \hline \end{array} \qquad \begin{array}{r} 405 \\ -176 \\ \hline \end{array} \qquad \begin{array}{r} 500 \\ -354 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 51 \\ \times 5 \\ \hline \end{array} \qquad \begin{array}{r} \$.74 \\ \times 3 \\ \hline \end{array} \qquad \begin{array}{r} 324 \\ \times 6 \\ \hline \end{array} \qquad \begin{array}{r} 203 \\ \times 5 \\ \hline \end{array}$$

4. 1 min. = ___ sec. 1 yd. = ___ in.
1 da. = ___ hr. 1 ft. = ___ in.
1 hr. = ___ min. 1 yd. = ___ ft.

5. 6:15 means 15 minutes _____ six.

6. 35,300 is read: _____ thousand _____ hundred.

7. $4 + 7 + 8 + 6 =$ _____

8. $3 + 5 + 9 + 4 =$ _____

Progress Test I

1. 32,007 is read: _____ thousand, _____.

2.
$$\begin{array}{r} \$4.65 \\ 2.83 \\ .74 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 354 \\ -136 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 57 \\ \times 3 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \$2.53 \\ \times 6 \\ \hline \end{array}$$

6. 2 ft. = _____ in.

7. Find the cost of 3 pairs of socks at \$.49 a pair. _____

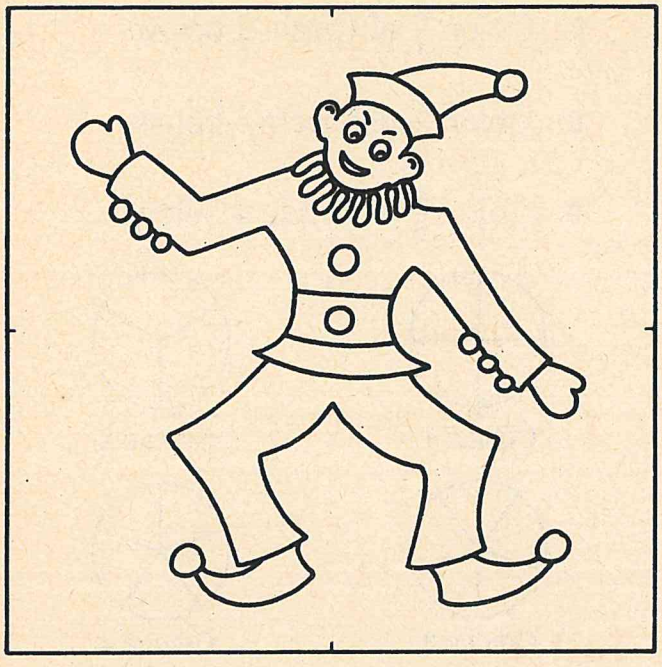
8. From 9:20 A.M. to 9:40 A.M. is _____ minutes.

9. Find the total cost of a baseball at \$.79, a bat at \$1.49, a mitt at \$1.29, and a catcher's mask at \$1.69. _____

10. Harry needs a strip of wood 28 in. long. He has a strip a yard long. The piece he has is _____ in. too long.

6.	7.	8.	9.	10.

Number of answers correct: _____ Date _____ _____, _____



Paul saw this picture of a clown in a magazine. Would you like to know an easy way to make a copy of the picture?

Use a ruler and draw lines to divide the picture of the clown into 4 equal parts. The lines are started for you.

Each part is **one fourth,** or **one quarter,** of the picture.

Now draw light lines to divide the empty square into *fourths,* or *quarters.* Use your ruler. The lines are started for you.

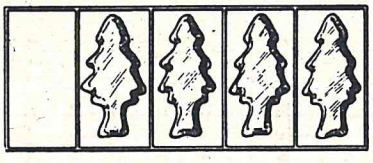
Draw on the fourths of the square what you see in the fourths of the clown picture.

When the picture is finished, rub out the lines in the square that divide it into 4 equal parts.

1. You divided the square into 4 equal parts. One part of the square is $\frac{1}{4}$ of the square. 2 parts are $\frac{2}{4}$ of the square. 3 parts are $\frac{3}{4}$ of the square. 4 parts are $\frac{4}{4}$ of the square, or the whole _____.

2. Numbers like $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, and $\frac{4}{4}$ are called **fractions.** Draw a line around each fraction in this row of numbers. Read the fractions.

1 2 $\frac{1}{2}$ 4 $\frac{2}{3}$ $\frac{4}{5}$



1. This box of maple sugar candy is divided into _____ equal parts. _____ part is empty. _____ parts are full. We say $\frac{1}{5}$ of the box is empty. We say $\frac{4}{5}$ of the box is _____.

In the fraction $\frac{1}{5}$, the 5 tells how many equal parts there are in the box. The 1 tells how many parts of the box are empty.

In the fraction $\frac{4}{5}$, the 5 tells how many equal parts there are in the _____. The 4 tells how many parts of the box are _____.

Write in figures.

2. One half _____ Two thirds ____

3. One fourth _____ One fifth _____

4. Three fourths ____ Two fifths ____

5. One third _____ Five fifths ____

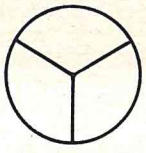
6. Color $\frac{3}{4}$ of Circle 1 below.

7. Color $\frac{2}{3}$ of Circle 2 below.

8. Color $\frac{2}{5}$ of Circle 3 below.

9. Color $\frac{4}{5}$ of Circle 4 below.

CIRCLE 1



CIRCLE 2

CIRCLE 3

CIRCLE 4

10. What part of Circle 1 is not colored? _____

11. What part of Circle 2 is not colored? _____

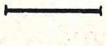
12. What part of Circle 3 is not colored? _____

13. What part of Circle 4 is not colored? _____

---

14. Measure these lines with your ruler. How long is each line?

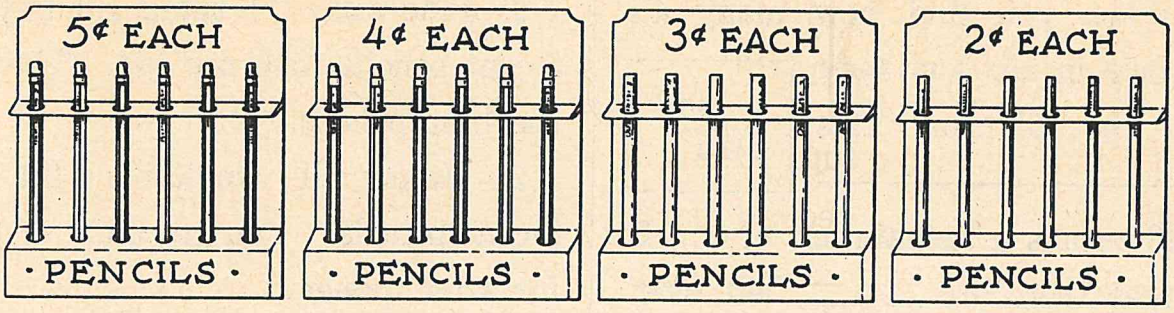
This line is _____ in. long.



This line is _____ in. long.

This line is _____ in. long.

This line is _____ in. long.



1. Jane wants to buy some pencils. She has 15 pennies. She finds that pencils cost 5¢ apiece, or 4¢, or 3¢, or 2¢.

Jane thought, " If I buy 5-cent pencils, I wonder how many I'll get for my 15¢." She knew she would get as many 5-cent pencils for 15¢ as there are 5's in 15.

Here is a dot picture of her 15 pennies.

• • • • • • • • • • • • • • •

Draw a line around the first 5 pennies; around the next 5 pennies; around the next 5.

For each 5 pennies she can get _____ 5-cent pencil. Your picture shows that for 15¢ she can get _____ 5-cent pencils.

When you find how many 5's there are in 15, you **divide** 15 by 5. 15 *divided by* 5 is 3.

You can write *15 divided by 5 is 3* this way: $15 \div 5 = 3$, or this way: $5\overline{)15}$ 3

The sign ÷ is read **divided by.**

2. Jane wondered how many 3-cent pencils she could get for 15 pennies. Here is a picture of her 15 pennies.

• • • • • • • • • • • • • • •

Draw a line around the first 3 pennies; around the next 3 pennies; and so on.

Your drawing shows that for 15¢ Jane can get _____ 3-cent pencils.

3. In 15 there are _____ 3's.
15 divided by 3 equals _____.

$15 \div 3 =$ _____ $3\overline{)15}$

4. $3 \times 5 =$ _____ $15 \div 5 =$ _____
$5 \times 3 =$ _____ $15 \div 3 =$ _____

5. On this dot picture of Jane's 15 pennies draw lines to show how many 4-cent pencils Jane can get for 15¢.

• • • • • • • • • • • • • • •

Your drawing shows that for 15¢ Jane can get _____ 4-cent pencils and she will have _____ cents left over.

Remainder in Division

6. When you find how many 4's there are in 15, you may write the division this way: $4\overline{)15}$ → $3\text{ r}3$

The r3 means a **remainder** of 3. It tells that there are _____ left over.

7. On this dot picture of Jane's 15 pennies draw lines to show how many 2-cent pencils Jane can get for 15¢.

• • • • • • • • • • • • • • •

Your drawing shows that for 15¢ Jane can get _____ 2-cent pencils and she will have _____¢ left over.

8. $2\overline{)15}$ $7\text{ r}1$ means 15 divided by 2 equals _____ and _____ over.

9. Jane said, "I think I'll buy the 5-cent pencils with my 15¢. They are the best pencils."

Jo said, "I wouldn't. I'd buy 2-cent pencils. You get more of those for your money."

Molly said, "Oh! I wouldn't buy 2-cent pencils. They have no erasers and the lead is hard."

Tom said, "I'd buy three 4-cent pencils, and then with the 3 cents left over I'd buy a 3-cent pencil. That way I'd get 4 pretty good pencils for 15¢."

Which kind of pencils would you buy if you had 15¢? _____

_____

Division Practice

1. Peter has a quarter. On this dot picture of 25 pennies draw lines to show how many 5-cent picture post cards he can buy.

• 25 ÷ 5 = _____

2. On this dot picture of 25 pennies draw lines to show how many 4-cent post cards Peter can get for his quarter.

• •

Your drawing shows that for 25¢ Peter can get _____ 4-cent post cards and have _____¢ left over.

3. On this dot picture of 25 pennies draw lines to show how many 3-cent cards Peter can get for 25¢.

• •

Your drawing shows that he can get _____ 3-cent cards for 25¢ and have _____¢ left over.

1. Ben uses 4 nails to make a potato man. Eight nails make _____ men.

2. 12 nails make _____ men.

3. 20 nails make _____ men.

4. 28 nails make _____ men.

5. 32 nails make _____ men.

6. 3 ft. = _____ yd. 6 ft. = _____ yd.

7. 9 ft. = _____ yd. 12 ft. = _____ yd.

8. 15 ft. = _____ yd. 18 ft. = _____ yd.

9. 21 ft. = _____ yd. 24 ft. = _____ yd.

10. 27 ft. = _____ yd. 30 ft. = _____ yd.

11. 10¢ = _____ nickels
    20¢ = _____ nickels

12. 15¢ = _____ nickels
    35¢ = _____ nickels

13. 25¢ = _____ nickels
    30¢ = _____ nickels

14. 40¢ = _____ nickels
    45¢ = _____ nickels

A Test on Division Facts

Write the answers to these divisions in 3 minutes. Make and study Help-Yourself Cards for any facts you do not know. Then take this test again.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*
1.	$3\overline{)3}$	$2\overline{)2}$	$4\overline{)20}$	$1\overline{)4}$	$5\overline{)45}$	$1\overline{)9}$	$3\overline{)27}$	$5\overline{)40}$
2.	$2\overline{)12}$	$3\overline{)0}$	$2\overline{)4}$	$4\overline{)32}$	$1\overline{)8}$	$4\overline{)8}$	$3\overline{)9}$	$2\overline{)6}$
3.	$1\overline{)7}$	$5\overline{)30}$	$4\overline{)0}$	$2\overline{)8}$	$2\overline{)10}$	$5\overline{)10}$	$3\overline{)24}$	$3\overline{)15}$
4.	$5\overline{)20}$	$4\overline{)16}$	$5\overline{)0}$	$1\overline{)6}$	$1\overline{)5}$	$5\overline{)25}$	$4\overline{)24}$	$2\overline{)18}$
5.	$4\overline{)12}$	$5\overline{)15}$	$1\overline{)3}$	$4\overline{)28}$	$3\overline{)21}$	$5\overline{)5}$	$3\overline{)18}$	$4\overline{)36}$
6.	$4\overline{)4}$	$2\overline{)14}$	$1\overline{)1}$	$5\overline{)35}$	$1\overline{)2}$	$2\overline{)16}$	$3\overline{)12}$	$3\overline{)6}$

For the test, see notes on page 3.

Sharing Is Dividing

1. Pete has a bag of pretzel sticks. There are 12 sticks in the bag. Pete wants to divide the 12 sticks equally among these three boys.

Jo	Tom	Pete
|	|	|

He passes the bag around. Each boy takes one pretzel stick. The mark under each boy's name shows one stick.

Pass the bag again and again to the boys, until the bag is empty. Give each boy one stick at a time.

The drawing shows that each boy gets $\frac{1}{3}$ of 12 sticks, or _____ sticks.

To find $\frac{1}{3}$ of a number, divide the number by 3.

$\frac{1}{3}$ of $18 = 18 \div 3 =$ _____

2. To find one half of a number, divide it by _____.

$\frac{1}{2}$ of $16 = 16 \div 2 =$ _____

3. To find one fourth of a number, divide it by _____.

$\frac{1}{4}$ of $20 = 20 \div 4 =$ _____

4. To find one fifth of a number, divide it by _____.

$\frac{1}{5}$ of $35 = 35 \div 5 =$ _____

5. $\frac{1}{2}$ of $8 =$ _____ $\frac{1}{3}$ of $12 =$ _____

6. $\frac{1}{4}$ of $24 =$ _____ $\frac{1}{5}$ of $30 =$ _____

7. $\frac{1}{5}$ of $40 =$ _____ $\frac{1}{2}$ of $10 =$ _____

8. $\frac{1}{3}$ of $18 =$ _____ $\frac{1}{4}$ of $16 =$ _____

9. $\frac{1}{3}$ of $15 =$ _____ $\frac{1}{2}$ of $12 =$ _____

10. $\frac{1}{4}$ of $28 =$ _____ $\frac{1}{5}$ of $45 =$ _____

11. $\frac{1}{2}$ of $18 =$ _____ $\frac{1}{3}$ of $21 =$ _____

12. $\frac{1}{4}$ of $36 =$ _____ $\frac{1}{5}$ of $25 =$ _____

13. $\frac{1}{3}$ of $27 =$ _____ $\frac{1}{2}$ of $14 =$ _____

14. $\frac{1}{4}$ of $32 =$ _____ $\frac{1}{5}$ of $20 =$ _____

15. If 5 children share 20¢ equally, each child will get _____¢.

16. There are 24 cards in a game of G-Man. If 3 children play, how many cards should each child have after the cards are dealt out? _____ If 4 children play, each child should have _____ cards.

17. If 18 pennies are piled in 3 equal piles, there will be _____ pennies in each pile.

18. Five girls bought a plant to give their teacher. They paid 35¢ for it. If the girls share the cost equally, each girl should pay _____¢.

In Ex. 1, have the children count the 3 sticks already given out and then go on counting 4, 5, 6, and so on up to 12, as they make a stroke under each boy's name in turn.

1. Draw a line around each number that can be divided by 5 without a remainder.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45					

2. The numbers you drew lines around in Ex. 1 are your Dividing-by-Five Helping Numbers.

When you find how many 5's there are in 13, you must *first think*, "How many 5's are there in _____?" 10 is your Helping Number. 10 can be divided by 5 without a remainder.

Then you think, "There are *two* 5's in 10." To find how much is left over, you think, "10 from 13 is _____."

3. 16 = _____ 5's and _____ over
17 = _____ 5's and _____ over
18 = _____ 5's and _____ over
19 = _____ 5's and _____ over
20 = _____ 5's and _____ over
21 = _____ 5's and _____ over

4. Draw a line around each of your Dividing-by-Four Helping Numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36				

5. 17 = _____ 4's and _____ over
18 = _____ 4's and _____ over
19 = _____ 4's and _____ over
20 = _____ 4's and _____ over
21 = _____ 4's and _____ over

6. Draw a line around your Dividing-by-Three Helping Numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27			

7. 22 = _____ 3's and _____ over
23 = _____ 3's and _____ over
24 = _____ 3's and _____ over
25 = _____ 3's and _____ over
26 = _____ 3's and _____ over
27 = _____ 3's and _____ over
28 = _____ 3's and _____ over
29 = _____ 3's and _____ over

8. Write your Dividing-by-Two Helping Numbers. 2 _____ _____

_____ _____ _____ _____ _____ _____

Division Practice

Write the Helping Number under each division, then do the division. The first one is done for you.

1. $2\overline{)5}$ (2 r1, 4)	$3\overline{)14}$	$2\overline{)7}$	
2. $4\overline{)29}$	$3\overline{)16}$	$5\overline{)17}$	
3. $4\overline{)34}$	$5\overline{)13}$	$4\overline{)27}$	
4. $2\overline{)11}$	$5\overline{)21}$	$3\overline{)20}$	
5. $2\overline{)13}$	$3\overline{)10}$	$2\overline{)17}$	
6. $4\overline{)22}$	$3\overline{)7}$	$5\overline{)9}$	
7. $4\overline{)17}$	$5\overline{)29}$	$4\overline{)37}$	
8. $2\overline{)15}$	$5\overline{)33}$	$3\overline{)25}$	
9. $2\overline{)19}$	$3\overline{)29}$	$4\overline{)15}$	
10. $5\overline{)47}$	$3\overline{)20}$	$4\overline{)38}$	
11. $2\overline{)3}$	$4\overline{)39}$	$5\overline{)43}$	

What is the largest number you can have left over when you are dividing by 2? _____ by 3? _____ by 4? _____ by 5? _____.

Mystery Additions

Jerry calls the first addition below a mystery addition. It's a mystery to him because after the sum has been written each of the figures from 1 to 9 has been used just once in the example.

Do the other additions below. Three of them are mystery additions. Draw a line around each mystery addition.

235 +746 981	219 +438	437 +152	384 +192	563 +124	352 +467

1. Three girls spent 60¢ for a doll dress pattern and some gingham for doll dresses. They wish to share the cost equally. Each girl should pay $\frac{1}{3}$ of 60¢. To find $\frac{1}{3}$ of 60¢, divide 60¢ by 3.

$$3\overline{)60}\quad 20$$

The division in the box shows that 60¢ ÷ 3 = 20¢. Explain the division. Each girl should pay _____¢.

2. Tell how each of these divisions is done.

$2\overline{)68}\quad 34$	$3\overline{)93}\quad 31$	$4\overline{)248}\quad 62$

3. Now cover the divisions above and do the same examples in the boxes below. Be sure to write each figure of your answer in *exactly* the right place.

$2\overline{)68}$	$3\overline{)93}$	$4\overline{)248}$

4. $2\overline{)82}$ $5\overline{)355}$ $3\overline{)186}$

5. $2\overline{)146}$ $3\overline{)210}$ $5\overline{)405}$

6. $3\overline{)159}$ $2\overline{)164}$ $4\overline{)168}$

7. $4\overline{)200}$ $5\overline{)200}$ $4\overline{)328}$

8. Tell how each of these divisions is done.

$3\overline{)188}\quad 62\text{r}2$	$5\overline{)2055}\quad 411$	$4\overline{)2809}\quad 702\text{r}1$

9. Now cover the worked divisions and do the same examples in the boxes below. Write each figure in *exactly* the right place.

$3\overline{)188}$	$5\overline{)2055}$	$4\overline{)2809}$

10. $2\overline{)43}$ $5\overline{)1505}$ $2\overline{)640}$

11. $4\overline{)326}$ $3\overline{)128}$ $5\overline{)100}$

12. $4\overline{)369}$ $2\overline{)85}$ $4\overline{)1208}$

13. $3\overline{)1560}$ $5\overline{)500}$ $3\overline{)1809}$

14. $2\overline{)107}$ $3\overline{)2196}$ $2\overline{)1208}$

15. $4\overline{)1647}$ $3\overline{)2405}$ $5\overline{)205}$

16. $4\overline{)2408}$ $5\overline{)2550}$ $4\overline{)2085}$

17. $3\overline{)2790}$ $5\overline{)4505}$ $2\overline{)1460}$

18. $3\overline{)2407}$ $4\overline{)2840}$ $2\overline{)169}$

Practice in Dividing

	a	*b*	*c*	*d*	*e*	*f*
1.	$5\overline{)255}$	$2\overline{)286}$	$3\overline{)696}$	$4\overline{)208}$	$4\overline{)248}$	$3\overline{)97}$
2.	$2\overline{)49}$	$4\overline{)285}$	$3\overline{)128}$	$5\overline{)4505}$	$4\overline{)169}$	$3\overline{)2106}$
3.	$5\overline{)300}$	$2\overline{)67}$	$5\overline{)350}$	$5\overline{)205}$	$2\overline{)103}$	$2\overline{)129}$
4.	$5\overline{)405}$	$2\overline{)85}$	$4\overline{)326}$	$5\overline{)1505}$	$2\overline{)1406}$	$3\overline{)2409}$
5.	$3\overline{)155}$	$4\overline{)367}$	$3\overline{)184}$	$2\overline{)1802}$	$4\overline{)1204}$	$3\overline{)278}$

6. $\frac{1}{2}$ of 164 = _____	$\frac{1}{3}$ of 249 = _____	$\frac{1}{4}$ of 208 = _____	$\frac{1}{5}$ of 450 = _____
$2\overline{)164}$	$\overline{)\ \ }$	$\overline{)\ \ }$	$\overline{)\ \ }$

Review Practice

1.	54 93 86 20	94 67 80 15	45 68 32 25	\$.46 .93 .87 .23
2.	974 −252	843 −109	621 −289	
3.	\$7.80 −2.59	\$6.34 −2.80	\$8.00 −2.65	
4.	31 ×7	52 ×5	28 ×3	53 ×9

5.	34 ×7	43 ×8	29 ×5	67 ×4
6.	423 ×3	314 ×4	425 ×6	298 ×2
7.	302 ×2	806 ×5	709 ×4	504 ×8
8.	$5\overline{)455}$	$2\overline{)187}$	$3\overline{)240}$	
9.	$4\overline{)368}$	$3\overline{)279}$	$5\overline{)457}$	
10.	$4\overline{)249}$	$3\overline{)2103}$	$2\overline{)1608}$	

Checking Division

Explain and check each of the divisions: ——→

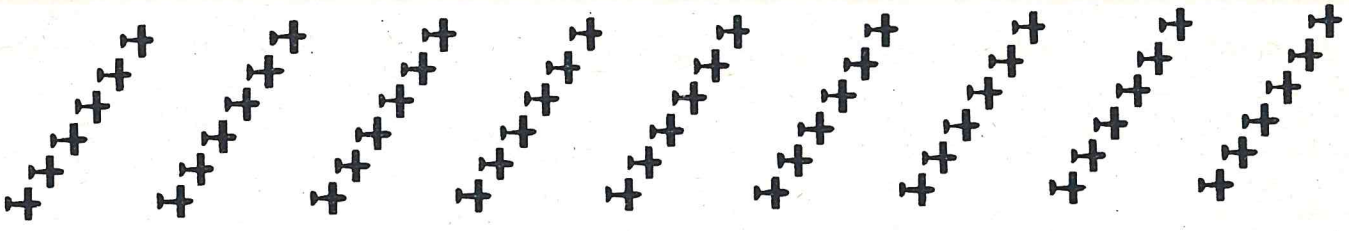
To check a division example, multiply the answer by the number you divided by. The answer you get should equal the number you divided.

3. To check a division example with a remainder, first multiply the answer by the number you divided by. Then _____ the remainder. The answer you get then should equal the number you divided.

1.	2.
$3\overline{)69}$ 23	$4\overline{)289}$ 72 r1
CHECK	CHECK
$23 \times 3 = 69$	$72 \times 4 = 288$, $288 + 1 = 289$

	a	*b*	*c*	*d*	*e*	*f*	*g*
4.	$2\overline{)48}$ 24	$3\overline{)90}$ 30	$2\overline{)164}$ 82	$3\overline{)249}$ 83	$2\overline{)186}$ 93	$4\overline{)328}$ 82	$2\overline{)148}$ 74
	CHECK	CHECK	CHECK	CHECK	CHECK	CHECK	CHECK
	$24 \times 2 = 48$	$30 \times 3 = 90$	$82 \times 2 = 164$	$83 \times 3 = 249$	$93 \times 2 = 186$	$82 \times 4 = 328$	$74 \times 2 = 148$
5.	$5\overline{)305}$ 61	$4\overline{)367}$ 91 r3	$3\overline{)244}$ 81 r1	$4\overline{)289}$ 72 r1	$3\overline{)185}$ 61 r2	$2\overline{)109}$ 54 r1	$5\overline{)408}$ 81 r3
	CHECK	CHECK	CHECK	CHECK	CHECK	CHECK	CHECK
	$61 \times 5 = 305$	$91 \times 4 = 364$, $364 + 3 = 367$	$81 \times 3 = 243$, $243 + 1 = 244$	$72 \times 4 = 288$, $288 + 1 = 289$	$61 \times 3 = 183$, $183 + 2 = 185$	$54 \times 2 = 108$, $108 + 1 = 109$	$81 \times 5 = 405$, $405 + 3 = 408$
6.	$2\overline{)85}$ 42 r1	$5\overline{)307}$ 61 r2	$4\overline{)326}$ 81 r2	$3\overline{)218}$ 72 r2	$4\overline{)245}$ 61 r1	$3\overline{)277}$ 92 r1	$5\overline{)3505}$ 701
	CHECK	CHECK	CHECK	CHECK	CHECK	CHECK	CHECK
	$42 \times 2 = 84$, $84 + 1 = 85$	$61 \times 5 = 305$, $305 + 2 = 307$	$61 \times 4 = 324$, $324 + 2 = 326$	$72 \times 3 = 216$, $216 + 2 = 218$	$61 \times 4 = 244$, $244 + 1 = 245$	$92 \times 3 = 276$, $276 + 1 = 277$	$701 \times 5 = 3505$

Multiplying with Sixes



1. Count the planes by 6's. Write the numbers. 6 12 ____ ____ ____ ____ ____ ____ ____

There are ____ planes all together.

2. In 1 group there are ____ planes.

3. In 2 groups there are ____ planes.

4. In 3 groups there are ____ planes.

5. In 4 groups there are ____ planes.

6. In 5 groups there are ____ planes.

7. In 6 groups there are ____ planes.

8. In 7 groups there are ____ planes.

9. In 8 groups there are ____ planes.

10. In 9 groups there are ____ planes.

11. The picture of the planes shows:

Two 6's are ____ Six 6's are ____
Three 6's are ____ Seven 6's are ____
Four 6's are ____ Eight 6's are ____
Five 6's are ____ Nine 6's are ____

12. $6 \times 4 =$ 24 and $4 \times 6 =$ ____

13. $6 \times 2 =$ ____ and $2 \times 6 =$ ____

14. $6 \times 5 =$ ____ and $5 \times 6 =$ ____

15. $6 \times 3 =$ ____ and $3 \times 6 =$ ____

Say the answers. Write them.

16.

6	2	1	6	6
$\times 4$	$\times 6$	$\times 6$	$\times 6$	$\times 3$

17.

6	0	6	6	6
$\times 8$	$\times 6$	$\times 9$	$\times 5$	$\times 7$

18.

6	7	9	4	6
$\times 2$	$\times 6$	$\times 6$	$\times 6$	$\times 0$

19.

6	8	5	3	6
$\times 1$	$\times 6$	$\times 6$	$\times 6$	$\times 6$

20. Seven 6-cent oranges cost ____¢.

21. There are 8 benches on the playground. 6 children can sit on each bench. In all, ____ children can sit on benches at the playground puppet show at the same time.

22. Joe bought a card of thumbtacks. There were 6 tacks in a row. There were 6 rows. There were ____ tacks on the card.

Pupils should make and study Help-Yourself Cards for any facts they fail in Exs. 16 to 19.

Multiplying with Sixes

Multiply and check by going over your work.

	a	*b*	*c*	*d*	*e*	*f*
1.	64 × 7	16 × 8	26 × 9	63 × 6	64 × 6	95 × 6
2.	86 × 6	69 × 5	76 × 4	97 × 6	219 × 6	246 × 9
3.	506 × 7	276 × 6	606 × 9	876 × 6	$5.43 × 6	$6.03 × 8
4.	$6.06 × 8	$5.17 × 6	$6.51 × 9	$4.81 × 6	$6.66 × 9	$1.38 × 6
5.	$9.06 × 6	$2.63 × 7	$6.27 × 6	$6.66 × 8	$3.76 × 6	$4.62 × 8

6. Mrs. Miller is buying sweaters for Bob, Tom, and Walter. The sweaters cost $3.69 each. Three sweaters will cost _____.

7. There are 16 ounces in a pound. In 8 pounds there are _____ ounces.

8. There are 36 inches in a yard. In 7 yards there are _____ inches.

9. There are 60 minutes in an hour. In 9 hours there are _____ minutes.

10. A half-dozen watermelons at $.39 each will cost _____.

11. If you need 54 inches of rope to make one jump rope, to make 6 jump ropes you will need _____ inches of rope.

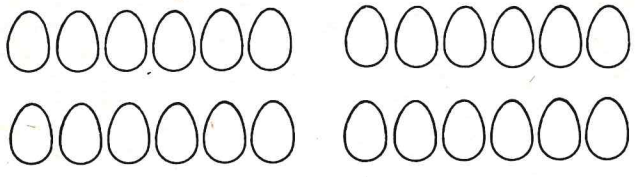
6.	7.	8.	9.	10.	11.

Dividing by Six

1. Jack has gathered 24 eggs. He wants to pack them in boxes to sell. He puts 6 eggs in each box. He wonders how many boxes he will need for his 24 eggs.

Jack must find out how many groups of 6 eggs there are in 24 eggs.

Here are the 24 eggs. Draw a line around each group of 6 eggs.



Your drawing shows that you can divide 24 eggs into _____ groups of 6 eggs.

There are _____ 6's in 24. Jack needs _____ egg boxes.

2.

1 six = 6	_____ sixes = 36
2 sixes = 12	_____ sixes = 42
_____ sixes = 18	_____ sixes = 48
_____ sixes = 24	_____ sixes = 54
_____ sixes = 30	_____ sixes = 60

3. $6 \times 6 = 36$, so $36 \div 6 =$ _____
$8 \times 6 = 48$, so $48 \div 6 =$ _____
$7 \times 6 = 42$, so $42 \div 6 =$ _____
$9 \times 6 = 54$, so $54 \div 6 =$ _____
$5 \times 6 = 30$, so $30 \div 6 =$ _____

Say the answers. Write them.

4. $6\overline{)12}$ $6\overline{)6}$ $6\overline{)24}$ $6\overline{)36}$ $6\overline{)54}$

5. $6\overline{)30}$ $6\overline{)0}$ $6\overline{)18}$ $6\overline{)48}$ $6\overline{)42}$

6. Ice-cream cones cost 6¢ each.

For 6¢ you can buy _____ cone.
For 30¢ you can buy _____ cones.
For 42¢ you can buy _____ cones.
For 36¢ you can buy _____ cones.
For 54¢ you can buy _____ cones.
For 24¢ you can buy _____ cones.
For 18¢ you can buy _____ cones.

7. Alice has a yard of ribbon. How many 6-inch pieces can she cut from it? _____

8. Mary baked 48 cookies to sell at the School Fair. If she packs them in cellophane bags, putting 6 cookies in each bag, she will need _____ bags.

9. Draw a line around the numbers which can be divided by 6 without a remainder.

12 16 24 26 27 48 18
32 36 46 42 45 54 30

Pupils should make and study Help-Yourself Cards for any facts they fail in Exs. 4 and 5.

1. Tom has 20 marbles. He wants to divide them equally among these 6 boys.

TOM	JOE	PETE	BOB	TED	BILL

Pass out the 20 marbles to the 6 boys. Give each boy 1 marble at a time. Make a dot under each boy's name for each marble he gets.

Each boy gets 3 marbles. There are 2 marbles extra; so Tom and Joe each get _____ extra marble.

$\frac{1}{6}$ of 20 = _____ and _____ left over

To find $\frac{1}{6}$ of a number, divide the number by 6.

2. $\frac{1}{6}$ of 12 = _____

$\frac{1}{6}$ of 13 = _____ and _____ over

$\frac{1}{6}$ of 36 = _____

$\frac{1}{6}$ of 37 = _____ and _____ over

3. Count by 6's. 6 12 _____

_____ _____ _____ _____ _____ _____

The numbers you wrote are your Dividing-by-Six Helping Numbers.

Under each division write your Helping Number and subtract to find the remainder. Be sure to write the answer to the division in the correct place.

4. $6\overline{)27}$ $6\overline{)31}$ $6\overline{)29}$ $6\overline{)51}$

24 30 24 48

3 1 5 3

5. $6\overline{)44}$ $6\overline{)58}$ $6\overline{)19}$ $6\overline{)10}$

42 54 18 6

2 4 1 4

6. $6\overline{)38}$ $6\overline{)8}$ $6\overline{)45}$ $6\overline{)56}$

36 6 42 54

2 2 3 2

7. $6\overline{)11}$ $6\overline{)52}$ $6\overline{)34}$ $6\overline{)40}$

6 48 30 36

5 4 4 4

8. $6\overline{)39}$ $6\overline{)55}$ $6\overline{)46}$ $6\overline{)21}$

36 54 42 18

3 1 4 3

9. $6\overline{)15}$ $6\overline{)20}$ $6\overline{)49}$ $6\overline{)16}$

12 18 48 12

3 2 1 4

10. The largest remainder you can have when you divide by 6 is _____.

In Ex. 1 have the pupils count from 1 to 20 as they make a dot under each boy's name in turn.

Longer Divisions

1. Ann paid 72¢ for a set of 6 paintbrushes. John wants to buy one. To find how much John should pay for one brush, Ann found $\frac{1}{6}$ of 72¢.

Ann divided 72 by 6 to find $\frac{1}{6}$ of 72. Explain her division and check: ⟶

John should pay _____¢ for one brush.

12	CHECK
6)72	12
6↓	×6
12	72
12	

2. Tell how each of these divisions is done. Explain each check.

13 r1	CHECK	57 r3	CHECK	38 r1	CHECK
6)79	13	6)345	57	6)229	38
6	×6	30	×6	18	×6
19	78	45	342	49	228
18	+1	42	+3	48	+1
1	79	3	345	1	229

Cover the divisions in Ex. 2. Work and check the same examples in Ex. 3.

CHECK	CHECK	CHECK
3. 6)79	6)345	6)229
CHECK	CHECK	CHECK
4. 6)276	6)438	6)290
CHECK	CHECK	CHECK
5. 6)416	6)206	6)514

1. $6\overline{)373}$ CHECK	$6\overline{)514}$ CHECK	$6\overline{)222}$ CHECK
2. $3\overline{)204}$ CHECK	$6\overline{)450}$ CHECK	$3\overline{)291}$ CHECK
3. $4\overline{)276}$ CHECK	$5\overline{)487}$ CHECK	$4\overline{)183}$ CHECK

4. A class gathered 210 pine cones. Six pupils are going to paint them. If they share the work equally, each pupil will paint _____ cones.

5. In 370 there are _____ fives.

6. How many booklets, each containing 6 sheets of paper, can be made from 150 sheets of paper? _____

7. How many 5-inch stakes can Harry cut from a strip of wood 75 inches long? _____

8. Marie paid 72¢ for a piece of oilcloth for beanbags. She made 6 beanbags out of the piece. The oilcloth for each beanbag cost _____¢.

9. $\frac{1}{6}$ of 498 = _____

4. CHECK	5. CHECK	6. CHECK
7. CHECK	8. CHECK	9. CHECK

Problem Test II

1. Donald bought a ball for \$.79, a bat for \$1.29, and a mitt for \$.98. He spent _____.

2. If you spend \$3.06, how much change will you get from \$5.00? _____

3. Carl bought a 9-lb. bag of dog food. There are 16 oz. in a pound; so in 9 lb. there are _____ oz.

4. Carl (Ex. 3) feeds his dog 6 oz. of dog food a day. The 9-lb. bag of food will last _____ days.

5. The sled Larry wants cost \$9.50. Larry has \$6.79. He needs _____ more.

6. Harry wants to buy a white sailor cap for \$.69 and a navy-blue pea jacket for \$9.49. How much money will he need? _____

7. Six girls want to share equally 48 candy kisses. Each girl will get _____ kisses.

8. Six plastic harmonicas at \$.59 each cost _____.

9. Which is longer, a string 1 ft. 5 in. long or a string 18 in. long? _____

10. Ann sent away for a doll that she saw advertised. The ad said, " Illustration $\frac{1}{3}$ actual size." Ann measured the picture of the doll. It was 6 inches tall. The real doll must be _____ inches long.

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

Review Practice

1. Take the tests on pages 3, 7, 13, and 25 again today.

Add and check.

	a	*b*	*c*	*d*	*e*	*f*
2.	28	84	463	475	$3.54	$9.67
	53	65	284	286	6.82	.28
	46	78	29	347	4.73	.25
	92	84	408	903	8.55	2.76

Subtract and check.

3.	835	406	974	$9.53	$18.75	$36.00
	270	283	209	2.86	9.32	15.74

Multiply. Check by going over your work.

4.	75	83	267	398	$4.66	$4.63
	× 6	× 5	× 6	× 6	× 8	× 9

Divide and check.

5.	6)198 CHECK	5)285 CHECK	6)468 CHECK
6.	3)262 CHECK	6)393 CHECK	6)284 CHECK

Try to do these divisions without writing down anything except the answers.

7.	2)64	3)693	2)128	2)96	4)132	3)168
8.	2)74	3)72	4)96	5)65	3)906	4)808

Review Practice

1.

346	567	$6.45
287	208	.87
936	435	4.00
423	928	.95

2.

463	573	$28.00
−181	−287	−9.63

3.

846	704	$9.24
×4	×6	×6

4. Divide and check.

$6\overline{)282}$	$5\overline{)370}$	$4\overline{)302}$
CHECK	CHECK	CHECK

Progress Test II

1. Color $\frac{3}{5}$ of this circle.

2. $54 \div 6 =$ _____

3. $7 \times 6 =$ _____

4. $38 \div 6 =$ _____ and _____ over

5. $6 \times \$3.49 =$ _____

6. $\frac{1}{6}$ of 336 = _____

7. $288 \div 6 =$ _____

8. Three bracelets at $1.69 each will cost _____.

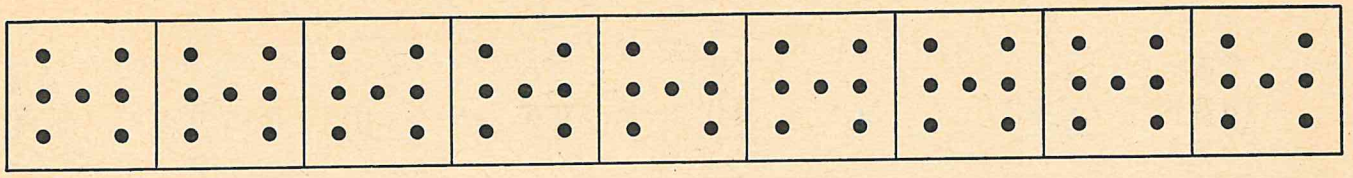
9. Jean cut 96 roses. If she ties them in bunches of 6 to sell, she will have _____ bunches.

10. If 204 children are divided into 6 equal groups, there will be _____ children in each group.

5.	6.	7.	8.	9.	10.

Number of answers correct: _____ Date: _____ _____, _____

Sevens in Multiplication



1. Count the dots above by 7's. Write the numbers. 7 14 ____

____ ____ ____ ____ ____ ____

There are ____ dots in all.

2. In 1 block there are ____ dots.
3. In 2 blocks there are ____ dots.
4. In 3 blocks there are ____ dots.
5. In 4 blocks there are ____ dots.
6. In 5 blocks there are ____ dots.
7. In 6 blocks there are ____ dots.
8. In 7 blocks there are ____ dots.
9. In 8 blocks there are ____ dots.
10. In 9 blocks there are ____ dots.

11. The dot pictures show:

Two 7's are ____ Six 7's are ____
Three 7's are ____ Seven 7's are ____
Four 7's are ____ Eight 7's are ____
Five 7's are ____ Nine 7's are ____

12. $4 \times 7 =$ ____ and $7 \times 4 =$ ____
13. $3 \times 7 =$ ____ and $7 \times 3 =$ ____
14. $6 \times 7 =$ ____ and $7 \times 6 =$ ____
15. $2 \times 7 =$ ____ and $7 \times 2 =$ ____
16. $5 \times 7 =$ ____ and $7 \times 5 =$ ____

Say the answers. Write them.

17.

7	7	7	7	7
$\times 2$	$\times 6$	$\times 4$	$\times 8$	$\times 0$

18.

7	7	7	8	7
$\times 9$	$\times 7$	$\times 1$	$\times 7$	$\times 3$

19.

7	6	9	4	5
$\times 5$	$\times 7$	$\times 7$	$\times 7$	$\times 7$

20. A half-dozen oranges at 7¢ each will cost ____¢.

21. In a classroom there are 5 rows of seats. There are 7 seats in each row. In all there are ____ seats.

22. How many days are there in 7 weeks? ____

23. Harry has 8 packages of gumdrops. There are 7 gumdrops in each package. All together Harry has ____ gumdrops.

24. Grapefruits are selling at 7¢ a pound. How much will Ann have to pay for 2 grapefruits weighing 3 pounds in all? ____

Pupils should make and study Help-Yourself Cards for any facts they fail in Exs. 17 to 19.

Sevens in Multiplication

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*
1.	74 × 7	52 × 8	67 × 9	83 × 7	95 × 7	16 × 7	87 × 6	27 × 7
2.	38 × 7	47 × 5	57 × 4	57 × 6	79 × 6	75 × 9	78 × 6	47 × 8
3.	$.45 × 7	$.87 × 6	$.75 × 9	$.09 × 7	$.67 × 6	$.75 × 8	$.89 × 6	$.18 × 6

4. $5.47 × 8 ____ $5.71 × 7 ____ $3.70 × 9 ____

5. $3.98 × 7 ____ $1.70 × 6 ____ $2.07 × 7 ____

6. $6.47 × 9 ____ $9.16 × 7 ____ $8.25 × 7 ____

7. $3.74 × 6 ____ $6.77 × 8 ____ $7.04 × 7 ____

8. Find the cost of 7 books at $.65 each. _____

9. 3 yards = _____ inches.

10. Jim has 8 quarters. That is _____ dollars.

11. In 1 year there are 365 days. In 3 years there are _____ days.

12. Find the cost of 2 plaid sport shirts at $2.79 each. _____

13. Peter rents out his bicycle to his friends for $.35 per day. Last week the bicycle was rented out every day. Peter earned _____ from his bicycle last week.

8.	9.	10.	11.	12.	13.

1. Find the cost of arithmetic books for a class of 27 pupils, if the books cost $.75 each.

You can get the answer by finding 27 × _____. The work in the box shows how to find 27 × $.75. Explain the multiplication.

$.75
× 27
525
150
$20.25

2. Tell how each of these multiplications is done.

35	38	$.65
× 17	× 23	× 23
245	114	195
35	76	130
595	874	$14.95

3. Cover the multiplications above and work the same examples in the boxes below.

35	38	$.65
× 17	× 23	× 23

4. 75 × 26 ; 28 × 74 ; 67 × 45

5. 64 × 73 ; 86 × 27 ; 36 × 47

6. 30 × 67 ; 42 × 27 ; 68 × 16

7. 79 × 63 ; 16 × 76 ; 57 × 46

8. 35 × 76 ; 47 × 67 ; 85 × 77

9. $.62 × 87 ; $.87 × 74 ; $.98 × 76

10. In Roosevelt School there are 12 rooms with 26 children in each room. There are _____ children in all.

11. 25 magnets at $.25 each cost _____.

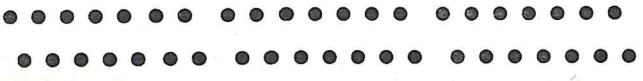
12. 12 ft. = _____ in.

10.	11.	12.

Dividing by Seven

1. Rita is making a leather belt. She is putting this horse design on it in wooden beads. She needs _____ beads for one horse. She has 42 beads. She wonders how many horses she can make on her belt with the 42 beads. She must find out how many groups of 7 beads there are in 42 beads.

Here are the 42 beads. Draw a line around each group of 7 beads.



Your drawing shows that you can divide 42 beads into _____ groups of 7 beads.

There are _____ 7's in 42. Rita can make _____ horses on her belt.

2.

One	7 = 7	_____	7's = 42
Two	7's = 14	_____	7's = 49
Three	7's = 21	_____	7's = 56
_____	7's = 28	_____	7's = 63
_____	7's = 35	_____	7's = 70

3. $7 \times 7 = 49$, so $49 \div 7 =$ _____
$8 \times 7 = 56$, so $56 \div 7 =$ _____
$9 \times 7 = 63$, so $63 \div 7 =$ _____
$6 \times 7 = 42$, so $42 \div 7 =$ _____
$4 \times 7 = 28$, so $28 \div 7 =$ _____

Say the answers. Write them. Then make and study Help-Yourself Cards.

4. $7\overline{)21}$ $7\overline{)35}$ $7\overline{)7}$ $7\overline{)49}$ $7\overline{)28}$

5. $7\overline{)42}$ $7\overline{)0}$ $7\overline{)63}$ $7\overline{)14}$ $7\overline{)56}$

6. Balloons cost 7¢ each.

For 7¢ you can buy _____ balloon.
For 35¢ you can buy _____ balloons.
For 63¢ you can buy _____ balloons.
For 49¢ you can buy _____ balloons.
For 56¢ you can buy _____ balloons.
For 42¢ you can buy _____ balloons.
For 28¢ you can buy _____ balloons.
For 14¢ you can buy _____ balloons.

7. The community Christmas tree is to be lighted every night from Dec. 11 through Dec. 31. The tree will be lighted for _____ nights. That is _____ weeks.

8. How many bookmarks 7 inches long can be cut from a strip of leather 56 inches long? _____

9. Draw a line around the numbers which can be divided by 7 without a remainder.

14	27	42	48	28	35
56	21	54	49	36	63

Pupils should make and study Help-Yourself Cards for any facts they fail in Exs. 4 and 5.

Uneven Division by Sevens

1. Seven boys were playing ball. Their ball went through a windowpane. A new pane of glass costs 30¢. They want to divide the cost equally among them. They need to find each boy's share of the cost.

They need to find $\frac{1}{7}$ of 30¢.

Divide up the 30-cent cost among the boys. Have each boy pay 1¢ at a time until the 30¢ is collected. Put a dot under each boy's name each time he pays a cent.

JOE	BOB	ED	TOM	JIM	JACK	RED

Your drawing shows that each boy should pay 4¢. But that would be only 28¢ in all; so _____ boys will have to pay an extra cent.

To find $\frac{1}{7}$ of a number, divide the number by 7.

2. $\frac{1}{7}$ of 14 = _____

$\frac{1}{7}$ of 15 = _____ and _____ over

$\frac{1}{7}$ of 49 = _____

$\frac{1}{7}$ of 51 = _____ and _____ over

3. Count by 7's. Write the numbers.

_____ _____ _____ _____ _____ _____

_____ _____ _____

The numbers you wrote are your Dividing-by-Seven Helping Numbers.

Under each division in Exs. 4 to 10 write the Helping Number. Then do each division.

4. $7\overline{)9}$ $7\overline{)25}$ $7\overline{)17}$ $7\overline{)57}$

5. $7\overline{)64}$ $7\overline{)16}$ $7\overline{)50}$ $7\overline{)10}$

6. $7\overline{)58}$ $7\overline{)8}$ $7\overline{)24}$ $7\overline{)43}$

7. $7\overline{)31}$ $7\overline{)32}$ $7\overline{)51}$ $7\overline{)11}$

8. $7\overline{)44}$ $7\overline{)38}$ $7\overline{)15}$ $7\overline{)66}$

9. $7\overline{)22}$ $7\overline{)37}$ $7\overline{)45}$ $7\overline{)18}$

10. $7\overline{)30}$ $7\overline{)52}$ $7\overline{)29}$ $7\overline{)65}$

11. The largest remainder you can have when you divide by 7 is _____.

In Ex. 1 have the pupils count from 1 to 30 as they make a dot under each boy's name in turn.

Longer Divisions

1. Diana paid 77¢ for 7 puppets. Each puppet cost $\frac{1}{7}$ of 77¢.

The division in the box shows how to divide 77 by 7 to find $\frac{1}{7}$ of 77. Explain the work and check. Each puppet cost _____¢.

```
  11
7)77
CHECK
  11
 ×7
 77
```

2. Explain these divisions and checks.

61 r2 7)429 42 9 7 2 CHECK 61 ×7 427 +2 429	84 7)588 56 28 28 CHECK 84 ×7 588	57 7)399 35 49 49 CHECK 57 ×7 399

3. Cover the divisions above. Work and check the same examples below.

7)429 CHECK	7)588 CHECK	7)399 CHECK

4.

7)357 CHECK	7)434 CHECK	7)378 CHECK

5.

7)499 CHECK	7)500 CHECK	7)309 CHECK

6.

7)518 CHECK	7)672 CHECK	7)581 CHECK

7.

7)661 CHECK	6)549 CHECK	6)488 CHECK

Divide and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	$7\overline{)518}$ CHECK	$6\overline{)504}$ CHECK	$6\overline{)578}$ CHECK	$7\overline{)204}$ CHECK	$4\overline{)270}$ CHECK	$7\overline{)604}$ CHECK
2.	$5\overline{)380}$ CHECK	$7\overline{)595}$ CHECK	$7\overline{)639}$ CHECK	$5\overline{)298}$ CHECK	$7\overline{)651}$ CHECK	$4\overline{)304}$ CHECK

3. How many weeks are there in 91 days? _____

4. Seven girls gave a party. The refreshments cost 84¢. If they share the cost equally, each girl should pay _____¢.

5. How many 7-cent paper horns can you get for 98¢? _____

6. How many 7's are there in 336? _____

7. Find $\frac{1}{7}$ of 455. _____

8. Peter borrowed a 224-page book from the library. He may keep it a week. If he reads _____ pages a day, he will finish the book on time.

3.	4.	5.	6.	7.	8.

Dividing Money

1. Tom bought 6 lilac bushes for $3.90. Fred wants to buy 1 of the bushes from Tom. To find out how much Fred should pay for it, Tom divided $3.90 by 6, as shown in the box. →

```
  $ .65
6)$3.90
  36
  30
  30
```

Explain Tom's division. It shows that $3.90 ÷ 6 = $.65. Fred should pay Tom _____ for 1 bush.

2. Explain these divisions and checks.

$ .96 7)$6.72 63 42 42	$ .78 7)$5.46 49 56 56	$ .66 7)$4.62 42 42 42
CHECK $.96 ×7 $6.72	CHECK $.78 ×7 $5.46	CHECK $.66 ×7 $4.62

3. Now cover the divisions above, work and check the same examples below.

7)$6.72	7)$5.46	7)$4.62
CHECK	CHECK	CHECK

4.

7)$4.48	6)$3.84	5)$4.75
CHECK	CHECK	CHECK

5.

4)$3.00	7)$6.58	6)$4.98
CHECK	CHECK	CHECK

6. Ann bought 3 mock-orange bushes for $2.25. If she sells 1 bush to Roger, how much should she charge for it?

_____

7. David bought 6 blackberry bushes for $1.50. He paid _____ for each bush.

6.	7.

1. Five girls want to share equally 200 sheets of colored paper. The division in the box shows how they divided 200 by 5.

```
  40
5)200
  20
   0
   0
```

They found that each girl should get _____ sheets of paper.

Explain the division.

2. Explain these divisions and checks.

70 5)350 35 0 0	60 r4 6)364 36 4 0 4	70 r2 7)492 49 2 0 2
CHECK 70 ×5 350	CHECK 60 ×6 360 +4 364	CHECK 70 ×7 490 +2 492

3. Cover the divisions above. Work and check the same examples below.

5)350 CHECK	6)364 CHECK	7)492 CHECK

4.

7)424 CHECK	7)563 CHECK	7)635 CHECK

5.

6)423 CHECK	5)450 CHECK	6)540 CHECK

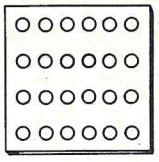
6. Tony bought a box of puppy biscuits for his dog, Pal. There are 150 biscuits in the box. If he gives Pal 5 biscuits a day, how long will the biscuits last? _____

7. There are 365 days in a year. 365 days = _____ weeks and _____ day.

6.	7.

A Help in Multiplying

1. On this card of thumbtacks point to each of the 4 groups of 6 tacks. Now point to each of the 6 groups of 4 tacks.



2. The tacks prove that if you know that 4 times 6 = 24, then you know that 6 times 4 = _____.

3. If you know that $2 \times 50¢ = \$1.00$, then you know that $50 \times 2¢ =$ _____.

4. If you know that $8 \times 25¢ = \$2.00$, then you know that $25 \times 8¢ =$ _____.

5. Jane wants to buy 75 3-cent stamps. She thought, "If 1 stamp costs 3¢, then 75 stamps will cost 75 times 3¢." She found 75 times 3¢. →

LONG WAY
3¢ 75 15 21 225¢ 225¢ = $2.25

6. Then Paul said, "It's quicker to find 3 times 75¢, and that will give you the right answer, too." Explain: ——→

SHORT WAY
75¢ 3 225¢ 225¢ = $2.25

7. Draw a line around the multiplication which would be easier to do.

Would the two answers be the same? _____

38 ×5	5 ×38

Find these products.

8. $17 \times 2¢ =$ _____
9. $65 \times 3¢ =$ _____
10. $79 \times 5¢ =$ _____
11. $234 \times 3¢ =$ _____

8.	9.
10.	11.

12. 16 5-cent balls cost _____.
13. 24 3-cent kites cost _____.
14. 36 4-cent hats cost _____.
15. 48 5-cent papers cost _____.
16. 56 6-cent pens cost _____.
17. 72 4-cent pencils cost _____.
18. 84 7-cent rulers cost _____.
19. 95 6-cent apples cost _____.
20. 150 3-cent stamps cost _____.

12.	13.	14.
15.	16.	17.
18.	19.	20.

Problem Test III

1. Patsy bought a pinafore for $1.69, a green corduroy skirt for $3.75, and a sweater for $3.19. In all Patsy's new clothes cost _____.

2. Fred wants to buy a handle-bar basket for his bicycle. The basket costs $3.15. Fred has only $2.77. He needs _____ more.

3. Six boys in the Outdoor Club are sending away for wrist flashlights. The lights cost $.98 each. For the 6 lights they must send _____.

4. There are 31 days in the month of December. There are _____ weeks and _____ days in December.

5. Tom has a dollar. If he spends $.39 for a piece of track for his electric train, how much will he have left?
_____

6. Find the cost of $\frac{1}{4}$ pound of candy at 80¢ a pound.
_____

7. Find the cost of 36 candy bars at 5¢ each. _____

8. If 6 children divide 144 cherries equally among them, each child will get _____ cherries.

9. Find the cost of 14 tickets at 25¢ each. _____

10. Nora paid $1.80 for a yard of red felt. She had enough felt to make 4 pairs of mittens. The mittens cost Nora _____ a pair.

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.
My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

Review Practice

1. Write the missing numbers.

11,758	11,759	
		11,763

2. $25 + 6 =$ ____ $68 + 7 =$ ____
$47 + 3 =$ ____ $53 + 9 =$ ____
$89 + 5 =$ ____ $84 + 7 =$ ____

3. $68 - 63 =$ ____ $41 - 36 =$ ____
$59 - 54 =$ ____ $33 - 28 =$ ____
$52 - 49 =$ ____ $51 - 48 =$ ____

4. $6 \times 20 =$ ____ $5 \times 50 =$ ____
$7 \times 30 =$ ____ $7 \times 70 =$ ____
$8 \times 50 =$ ____ $6 \times 80 =$ ____

5. $\frac{1}{7}$ of 49 = ____ $\frac{1}{7}$ of 63 = ____
$\frac{1}{6}$ of 54 = ____ $\frac{1}{6}$ of 36 = ____
$\frac{1}{5}$ of 45 = ____ $\frac{1}{7}$ of 56 = ____

Write only the answers when you do the divisions in Exs. 6 to 9.

6. $3\overline{)69}$ $2\overline{)486}$ $3\overline{)276}$

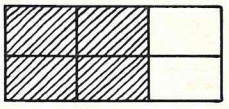
7. $2\overline{)132}$ $4\overline{)96}$ $5\overline{)260}$

8. $4\overline{)360}$ $4\overline{)172}$ $3\overline{)68}$

9. $2\overline{)47}$ $2\overline{)608}$ $3\overline{)187}$

10. 1 min. = ____ sec. 1 gal. = ____ qt.
1 day = ____ hr. 1 qt. = ____ pt.
1 yd. = ____ in. 1 ft. 4 in. = ____ in.

11. What part of this picture is white? ____



12.

24	75	73
$\times 6$	$\times 8$	$\times 6$

13.

\$1.75	\$2.89	\$6.04
$\times 4$	$\times 5$	$\times 8$

14.

28	55	78
$\times 63$	$\times 74$	$\times 65$

15. $7\overline{)60}$ $6\overline{)52}$ $7\overline{)46}$

16. $6\overline{)422}$ $7\overline{)490}$ $7\overline{)634}$

17. $6\overline{)\$1.92}$ $7\overline{)\$3.15}$ $5\overline{)\$4.85}$

18. $5\overline{)\$3.90}$ $4\overline{)\$2.68}$ $7\overline{)\$4.55}$

19. Take the tests on pages 3, 7, 13, and 25 again today.

Review Practice

1.

284	$7.56	$ .78
365	2.84	4.65
283	3.05	.29
195	2.89	5.00

2.

897	500	406
−246	−398	−387

3. $6\overline{)\$2.16}$ $7\overline{)\$3.43}$ $5\overline{)\$2.45}$

4. $6\overline{)49}$ $7\overline{)98}$ $6\overline{)146}$

5. $7\overline{)427}$ $7\overline{)560}$ $7\overline{)493}$

6.

504	$.46	$4.69
×6	×23	×7

Progress Test III

1. 706 × 7

2. $1.75 × 7

3. $7\overline{)\$5.04}$

4. 74 × 65

5. $7\overline{)356}$

6. $7\overline{)490}$

7. Draw a line around the numbers which can be divided by 7 without a remainder.

54 56 48 49 42 36

8. Jane has a box of 50 cod-liver-oil tablets. If Jane takes 1 a day, the tablets will last for _____ weeks and _____ day.

9. $\frac{1}{7}$ of 657 = _____

10. Four sailor hats at $.49 each cost _____.

8.	9.	10.

Number of answers correct: _____ Date: _____ _____, _____

The Eights in Multiplication

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72

This chart will help you to learn the multiplication and division facts of eights.

1. In each row (across) there are _____ circles.

2. In 2 rows there are _____ circles.
2 eights = _____ $2 \times 8 =$ _____

3. In 3 rows there are _____ circles.
3 eights = _____ $3 \times 8 =$ _____

4. In 4 rows there are _____ circles.
4 eights = _____ $4 \times 8 =$ _____

5. In 5 rows there are _____ circles.
5 eights = _____ $5 \times 8 =$ _____

6. In 6 rows there are _____ circles.
6 eights = _____ $6 \times 8 =$ _____

7. In 7 rows there are _____ circles.
7 eights = _____ $7 \times 8 =$ _____

8. In 8 rows there are _____ circles.
8 eights = _____ $8 \times 8 =$ _____

9. In 9 rows there are _____ circles.
9 eights = _____ $9 \times 8 =$ _____

10. $6 \times 8 =$ _____ and $8 \times 6 =$ _____

11. $7 \times 8 =$ _____ and $8 \times 7 =$ _____

12. $3 \times 8 =$ _____ and $8 \times 3 =$ _____

13. $5 \times 8 =$ _____ and $8 \times 5 =$ _____

14. $9 \times 8 =$ _____ and $8 \times 9 =$ _____

15. $4 \times 8 =$ _____ and $8 \times 4 =$ _____

16. $2 \times 8 =$ _____ and $8 \times 2 =$ _____

Say the answers. Write them.

17.

4	8	8	8	8
$\times 8$	$\times 7$	$\times 5$	$\times 8$	$\times 3$

18.

8	8	8	7	0
$\times 6$	$\times 9$	$\times 2$	$\times 8$	$\times 8$

19.

5	6	9	1	8
$\times 8$	$\times 8$	$\times 8$	$\times 8$	$\times 4$

20. Lee has 9 rows of arithmetic examples to do. There are 8 examples in each row. All together he has _____ examples to do.

21. At 8¢ each, 8 toys cost _____¢.

22. John needs 8 in. of cord to tie up 1 plant. To tie up 6 plants, he needs _____ in. of cord.

23. A gallon of honey will fill 8 pint jars. Three gallons of honey will fill _____ pint jars.

Have pupils make and study Help-Yourself Cards for facts they fail in Exs. 17 to 19.

The Eights in Division

1. The circles in the chart on page 54 are arranged in rows, with _____ circles in each row.

2. Look at the first 16 circles. In 16 there are ____ 8's. $16 \div 8 =$ ____

3. Look at the first 24 circles. In 24 there are ____ 8's. $24 \div 8 =$ ____

4. Look at the first 40 circles. In 40 there are ____ 8's. $40 \div 8 =$ ____

5. $48 =$ ____ 8's $48 \div 8 =$ ____

6. $56 =$ ____ 8's $56 \div 8 =$ ____

7. $64 =$ ____ 8's $64 \div 8 =$ ____

8. $72 =$ ____ 8's $72 \div 8 =$ ____

9.

1 eight = 8	____ eights = 48
2 eights = 16	____ eights = 56
____ eights = 24	____ eights = 64
____ eights = 32	____ eights = 72
____ eights = 40	____ eights = 80

10.
$7 \times 8 = 56$, so $56 \div 8 =$ _____
$6 \times 8 = 48$, so $48 \div 8 =$ _____
$5 \times 8 = 40$, so $40 \div 8 =$ _____
$9 \times 8 = 72$, so $72 \div 8 =$ _____
$4 \times 8 = 32$, so $32 \div 8 =$ _____
$2 \times 8 = 16$, so $16 \div 8 =$ _____
$3 \times 8 = 24$, so $24 \div 8 =$ _____

Say the answers. Then write them.

11. $8\overline{)24}$ $8\overline{)64}$ $8\overline{)8}$ $8\overline{)48}$ $8\overline{)40}$

12. $8\overline{)56}$ $8\overline{)0}$ $8\overline{)32}$ $8\overline{)72}$ $8\overline{)16}$

13. Bus tickets cost 8¢ each.

For 8¢ you can buy _____ ticket.
For 32¢ you can buy _____ tickets.
For 56¢ you can buy _____ tickets.
For 64¢ you can buy _____ tickets.
For 48¢ you can buy _____ tickets.
For 72¢ you can buy _____ tickets.
For 40¢ you can buy _____ tickets.
For 24¢ you can buy _____ tickets.

14. If 1 cake will serve 8 children, how many cakes will be needed to serve 24 children? _____

15. How many pieces of wire 8 in. long can Bob cut from a piece of wire 56 in. long? _____

16. Sue can make 8 valentines from 1 sheet of paper. To make 32 valentines, she needs _____ sheets.

17. Draw a line around the numbers that can be divided by 8 without a remainder. 64 54 63 48 24 56 49 36 40 72 32 16

Have pupils make and study Help-Yourself Cards for facts they fail in Exs. 11 and 12.

Eights in Multiplication

Multiply and check by going over your work.

1.	54 × 8	63 × 7	88 × 9	80 × 6
2.	28 × 8	92 × 7	17 × 8	31 × 6
3.	13 × 7	96 × 8	42 × 5	85 × 8
4.	74 × 8	53 × 4	63 × 8	40 × 7
5.	\$.42 × 8	\$.95 × 7	\$.51 × 8	\$.64 × 6
6.	275 × 5	530 × 8	186 × 7	
7.	318 × 8	987 × 4	207 × 8	
8.	\$7.58 × 7	\$1.86 × 8	\$9.08 × 3	
9.	74 × 98	69 × 46	63 × 88	
10.	\$.85 × 26	\$.28 × 39	\$.86 × 65	

11. At the Stevens School lunchroom lunch costs 18¢ a person. How much will it cost for the four Boyer children to have lunch at school today? _____

12. Find the cost of 3 pairs of boy's overalls at \$1.98 a pair. _____

13. The Snow White Laundry charges 18¢ to launder a girl's dress. If Eve sends 6 of her dresses to the laundry, the bill will be _____.

14. After Joe sold 18 magazines at 15¢ each, he counted his money. He had \$2.70. Did he have the correct amount? _____

15. Find the cost of 84 3-cent stamps.

16. 8 hours = _____ minutes.

11.	12.	13.
14.	15.	16.

Uneven Division by Eights

1. The 8 girls in a sewing class want to buy a jumper dress pattern, size 9, price 25¢. They want to divide the cost equally among them. They need to find each girl's share of the cost.

They need to find $\frac{1}{8}$ of 25¢.

Divide up the 25-cent cost among the 8 girls. Have each girl pay 1¢ at a time. Put a dot under each girl's initials each time she pays a cent.

Your drawing shows that each girl should pay 3¢. But that would be only 24¢ in all; so _____ girl will have to pay an extra cent.

J. P.	R. L.	M. C.	R. T.	B. S.	P. M.	I. B.	H. M.

To find $\frac{1}{8}$ of a number, divide the number by 8.

2. $\frac{1}{8}$ of 16 = _____

$\frac{1}{8}$ of 17 = _____ and _____ over

$\frac{1}{8}$ of 32 = _____

$\frac{1}{8}$ of 34 = _____ and _____ over

$\frac{1}{8}$ of 48 = _____

$\frac{1}{8}$ of 51 = _____ and _____ over

$\frac{1}{8}$ of 64 = _____

$\frac{1}{8}$ of 68 = _____ and _____ over

3. Count by 8's. ____ ____ ____

____ ____ ____ ____ ____ ____.

The numbers you wrote are your Dividing-by-Eight Helping Numbers.

4. $8\overline{)50}$ r2 (48, 2) $\quad 8\overline{)9} \quad 8\overline{)20} \quad 8\overline{)58}$

5. $8\overline{)66} \quad 8\overline{)12} \quad 8\overline{)17} \quad 8\overline{)42}$

6. $8\overline{)25} \quad 8\overline{)74} \quad 8\overline{)34} \quad 8\overline{)75}$

7. $8\overline{)26} \quad 8\overline{)33} \quad 8\overline{)11} \quad 8\overline{)67}$

8. $8\overline{)19} \quad 8\overline{)18} \quad 8\overline{)41} \quad 8\overline{)59}$

9. $8\overline{)49} \quad 8\overline{)27} \quad 8\overline{)51} \quad 8\overline{)10}$

10. $8\overline{)93} \quad 8\overline{)28} \quad 8\overline{)57} \quad 8\overline{)35}$

11. $8\overline{)65} \quad 8\overline{)43} \quad 8\overline{)36} \quad 8\overline{)52}$

12. The largest remainder you can have when you divide by 8 is _____.

Problems to Solve

1. Don wants a pair of long pants that cost $4.29. He has only $2.85. He needs _____ more.

2. How many 4-inch bookmarks can Ted cut from a strip of leather 48 inches long? _____

3. Jane and Walter bought a bottle of perfume to give to their mother for a birthday gift. They paid 86¢ for it. If they share the cost equally, each should pay _____¢.

4. Nancy can make 12 Christmas cards out of 1 large sheet of red paper. She has 3 sheets of paper; so she can make _____ cards.

5. Ann's mother sent her to the store to buy 50 clothespins. The pins came 5 on a card. Ann should buy _____ cards.

6. Jean bought a fountain pen for $1.19, a bottle of ink for $.10, and a box of writing paper for $.39. In all she spent _____.

7. Jean (Ex. 6) paid her bill with two 1-dollar bills. Her change was _____.

8. John earned 75¢ raking leaves. Peter earned 48¢. John earned _____¢ more than Peter.

9. Four bus loads of children from Roosevelt School went to the County Fair. There were 28 children in each bus. How many children went to the Fair from Roosevelt School? _____

10. There are 36 cards in a game of Cowboy. If 3 children play, how many cards will be dealt out to each of them? _____

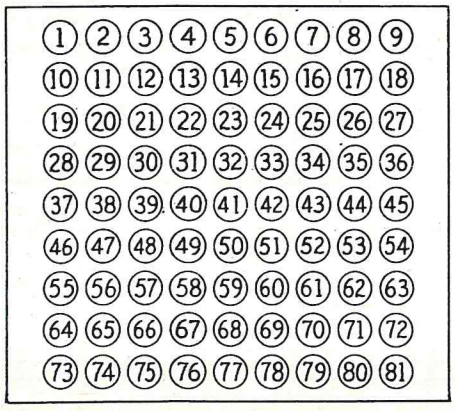
1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

A Page of Division

Divide. Check on a separate paper.

	a	*b*	*c*	*d*	*e*	*f*
1.	$8\overline{)584}$	$7\overline{)595}$	$8\overline{)512}$	$6\overline{)402}$	$5\overline{)470}$	$7\overline{)\$6.09}$
2.	$8\overline{)760}$	$6\overline{)540}$	$8\overline{)696}$	$8\overline{)643}$	$6\overline{)506}$	$8\overline{)\$4.96}$
3.	$8\overline{)596}$	$8\overline{)720}$	$7\overline{)644}$	$8\overline{)725}$	$6\overline{)563}$	$6\overline{)\$3.12}$
4.	$7\overline{)658}$	$7\overline{)425}$	$8\overline{)298}$	$6\overline{)570}$	$6\overline{)585}$	$8\overline{)\$3.84}$
5.	$7\overline{)511}$	$5\overline{)370}$	$6\overline{)355}$	$6\overline{)564}$	$4\overline{)312}$	$5\overline{)\$4.50}$
6.	$8\overline{)472}$	$6\overline{)567}$	$5\overline{)488}$	$3\overline{)900}$	$3\overline{)105}$	$6\overline{)\$3.84}$

The Nines in Multiplication



This chart will help you to learn the multiplication and division facts of nines.

1. In each row (across) there are _____ circles.

2. In 2 rows there are _____ circles.
2 nines = _____ $2 \times 9 =$ _____

3. In 3 rows there are _____ circles.
3 nines = _____ $3 \times 9 =$ _____

4. In 4 rows there are _____ circles.
4 nines = _____ $4 \times 9 =$ _____

5. In 5 rows there are _____ circles.
5 nines = _____ $5 \times 9 =$ _____

6. In 6 rows there are _____ circles.
6 nines = _____ $6 \times 9 =$ _____

7. In 7 rows there are _____ circles.
7 nines = _____ $7 \times 9 =$ _____

8. In 8 rows there are _____ circles.
8 nines = _____ $8 \times 9 =$ _____

9. In 9 rows there are _____ circles.
9 nines = _____ $9 \times 9 =$ _____

10.

$1 \times 9 =$ _____	$3 \times 9 =$ _____
$2 \times 9 =$ _____	$7 \times 9 =$ _____
$3 \times 9 =$ _____	$6 \times 9 =$ _____
$4 \times 9 =$ _____	$8 \times 9 =$ _____
$5 \times 9 =$ _____	$4 \times 9 =$ _____
$6 \times 9 =$ _____	$5 \times 9 =$ _____
$7 \times 9 =$ _____	$2 \times 9 =$ _____
$8 \times 9 =$ _____	$9 \times 9 =$ _____
$9 \times 9 =$ _____	$1 \times 9 =$ _____

11. $8 \times 9 =$ _____ and $9 \times 8 =$ _____

12. $7 \times 9 =$ _____ and $9 \times 7 =$ _____

13. $5 \times 9 =$ _____ and $9 \times 5 =$ _____

14. $6 \times 9 =$ _____ and $9 \times 6 =$ _____

15. $3 \times 9 =$ _____ and $9 \times 3 =$ _____

16. $4 \times 9 =$ _____ and $9 \times 4 =$ _____

Say the answers. Write them.

17.

9	7	4	9	8
$\times 5$	$\times 9$	$\times 9$	$\times 6$	$\times 9$

18.

9	5	9	0	3
$\times 3$	$\times 9$	$\times 9$	$\times 9$	$\times 9$

19.

9	9	6	9	9
$\times 8$	$\times 4$	$\times 9$	$\times 2$	$\times 7$

Have pupils make and study Help-Yourself Cards for facts they fail in Exs. 17 to 19.

1. Look at the first 18 circles in the chart on page 60. In 18 circles there are _____ 9's.

$18 \div 9 =$ _____ $9\overline{)18}$

2. In 27 circles there are _____ 9's.

$27 \div 9 =$ _____ $9\overline{)27}$

3. In 36 circles there are _____ 9's.

$36 \div 9 =$ _____ $9\overline{)36}$

4. In 45 circles there are _____ 9's.

$45 \div 9 =$ _____ $9\overline{)45}$

5. In 54 circles there are _____ 9's.

$54 \div 9 =$ _____ $9\overline{)54}$

6. In 63 circles there are _____ 9's.

$63 \div 9 =$ _____ $9\overline{)63}$

7. In 72 circles there are _____ 9's.

$72 \div 9 =$ _____ $9\overline{)72}$

8. In 81 circles there are _____ 9's.

$81 \div 9 =$ _____ $9\overline{)81}$

9.

1 nine = 9	____ nines = 54
2 nines = 18	____ nines = 63
____ nines = 27	____ nines = 72
____ nines = 36	____ nines = 81
____ nines = 45	____ nines = 90

10.
$7 \times 9 = 63$, so $63 \div 9 =$ _____
$6 \times 9 = 54$, so $54 \div 9 =$ _____
$5 \times 9 = 45$, so $45 \div 9 =$ _____
$9 \times 9 = 81$, so $81 \div 9 =$ _____
$4 \times 9 = 36$, so $36 \div 9 =$ _____
$2 \times 9 = 18$, so $18 \div 9 =$ _____
$3 \times 9 = 27$, so $27 \div 9 =$ _____
$8 \times 9 = 72$, so $72 \div 9 =$ _____

Say the answers. Then write them.

11. $9\overline{)27}$ $9\overline{)54}$ $9\overline{)9}$ $9\overline{)45}$ $9\overline{)81}$

12. $9\overline{)18}$ $9\overline{)36}$ $9\overline{)63}$ $9\overline{)0}$ $9\overline{)72}$

13. Balloons cost 9¢ each.

For 9¢ you can buy _____ balloon.
For 36¢ you can buy _____ balloons.
For 63¢ you can buy _____ balloons.
For 72¢ you can buy _____ balloons.
For 54¢ you can buy _____ balloons.
For 81¢ you can buy _____ balloons.

14. From a yard of ribbon you can cut _____ 9-inch pieces.

15. Betty's cupcake pans each hold 9 cakes. To get 27 cakes, she needs to bake _____ pans of cupcakes.

16. Draw a line around the numbers that can be divided by 9 without a remainder. 24 27 63 36 48 72 81 54

Have pupils make and study Help-Yourself Cards for facts they fail in Exs. 11 and 12.

Nines in Multiplication

Multiply and check.

1.	25 × 9	69 × 8	37 × 9	67 × 7
2.	57 × 6	46 × 9	47 × 5	58 × 9
3.	64 × 9	78 × 4	79 × 9	58 × 8
4.	\$.58 × 7	\$.83 × 9	\$.92 × 9	
5.	591 × 9	368 × 5	659 × 4	
6.	347 × 8	829 × 9	409 × 7	
7.	\$7.15 × 9	\$6.06 × 9	\$2.59 × 5	
8.	96 × 89	69 × 87	45 × 69	
9.	32 × 74	54 × 93	33 × 92	
10.	\$.71 × 39	\$.89 × 84	\$.98 × 79	

11. There are 14 cabins at Camp Wildwood. Each cabin has 9 bunks. There are _____ bunks in all.

12. Find the cost of 3 pairs of camp shorts at \$1.94 a pair. _____

13. To spend one week at Camp Wildwood a boy has to pay \$9.00. If Jim stays for the whole 8-week season, he will have to pay _____.

14. At setting-up exercises one morning at camp, Tom counted 13 rows of boys with 9 boys in a row. There were _____ boys in all.

15. How much will 6 pairs of swimming trunks cost at 89¢ a pair? _____

16. Find the cost of 45 Camp Wildwood pennants at \$.49 each. _____

11.	12.	13.
14.	15.	16.

Finding One Ninth of a Number

1. Nine boys built a doghouse and sold it at a gain of 72¢. They wanted to share the gain equally and wondered how much each boy should get.

Tommy said, "9 times *some number of cents* = 72¢. 9 × *what number* = 72? 9 × 8 = 72. To find the 8, I divided 72 by 9. We should each get 8¢."

Tommy really found $\frac{1}{9}$ of 72¢ = _____¢.

To find $\frac{1}{9}$ of a number, divide the number by 9.

2. Nine girls wish to share equally the cost of a 54-cent victrola record. They need to find each girl's share of the cost.

To find the equal share, 54¢ is divided into 9 equal parts. There will be _____ cents in each part.

9 × *the number of cents in each equal part* = 54¢. 9 × *what number* = 54? 9 × _____ = 54. To find the missing number, divide 54 by _____. Each girl's share of the cost is _____¢.

$\frac{1}{9}$ of 54¢ = _____¢.

3. $\frac{1}{9}$ of 36 means 9 × *what number* = 36. 9 × _____ = 36. To find the missing number, divide 36 by _____.

$\frac{1}{9}$ of 36 = _____ 36 ÷ 9 = _____

4. $\frac{1}{9}$ of 27 means 9 × *what number* = 27. 9 × _____ = 27. To find the missing number, divide _____ by _____.

$\frac{1}{9}$ of 27 = _____ 27 ÷ 9 = _____

5. $\frac{1}{9}$ of 63 means 9 × *what number* = 63. 9 × _____ = 63. To find the missing number, divide _____ by _____.

$\frac{1}{9}$ of 63 = _____ 63 ÷ 9 = _____

6. $\frac{1}{9}$ of 9 = _____ $\frac{1}{9}$ of 18 = _____

$\frac{1}{9}$ of 54 = _____ $\frac{1}{9}$ of 45 = _____

$\frac{1}{9}$ of 27 = _____ $\frac{1}{9}$ of 36 = _____

$\frac{1}{9}$ of 81 = _____ $\frac{1}{9}$ of 63 = _____

7. Joy made 9 hair bows from a piece of ribbon which cost 45¢. The cost of each bow was _____¢.

8. $\frac{1}{9}$ of 198 = _____

9. $\frac{1}{9}$ of 477 = _____

10. $\frac{1}{9}$ of 684 = _____

11. $\frac{1}{9}$ of 873 = _____

8.	9.	10.	11.

Uneven Division by Nines

1. Tom made this chart to help him learn to divide by 9.

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18
19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54
55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81
82	83	84	85	86	87	88	89	90

The circles are arranged in rows of _____. In 18 there are _____ nines; in 63 there are _____ nines.

2. To find how many nines there are in 53, Tom looked at 53 on the chart. He saw that in 53 there are _____ nines and 8 over.

3. Look at the chart for help.

28 = _____ 9's and _____ over
39 = _____ 9's and _____ over
73 = _____ 9's and _____ over
80 = _____ 9's and _____ over
65 = _____ 9's and _____ over

4. 63 ÷ 9 = _____ and _____ over
64 ÷ 9 = _____ and _____ over
71 ÷ 9 = _____ and _____ over
72 ÷ 9 = _____ and _____ over
73 ÷ 9 = _____ and _____ over

5. 82 ÷ 9 = _____ and _____ over
87 ÷ 9 = _____ and _____ over
90 ÷ 9 = _____ and _____ over
84 ÷ 9 = _____ and _____ over

6. $9\overline{)66}$ $9\overline{)39}$ $9\overline{)85}$ $9\overline{)76}$

7. $9\overline{)48}$ $9\overline{)13}$ $9\overline{)41}$ $9\overline{)57}$

8. $9\overline{)32}$ $9\overline{)22}$ $9\overline{)60}$ $9\overline{)12}$

9. $9\overline{)28}$ $9\overline{)21}$ $9\overline{)38}$ $9\overline{)82}$

10. $9\overline{)29}$ $9\overline{)19}$ $9\overline{)47}$ $9\overline{)73}$

11. $9\overline{)37}$ $9\overline{)20}$ $9\overline{)10}$ $9\overline{)65}$

12. $9\overline{)74}$ $9\overline{)46}$ $9\overline{)56}$ $9\overline{)64}$

13. $9\overline{)11}$ $9\overline{)30}$ $9\overline{)55}$ $9\overline{)83}$

14. The largest remainder you can have when you divide by 9 is _____.

A Page of Division

Divide. Check on a separate paper.

	a	*b*	*c*	*d*	*e*	*f*
1.	$9\overline{)666}$	$9\overline{)585}$	$8\overline{)760}$	$7\overline{)329}$	$6\overline{)98}$	$9\overline{)\$7.47}$
2.	$6\overline{)384}$	$9\overline{)747}$	$9\overline{)864}$	$5\overline{)250}$	$6\overline{)85}$	$2\overline{)\$1.54}$
3.	$9\overline{)884}$	$4\overline{)362}$	$5\overline{)2505}$	$8\overline{)696}$	$6\overline{)354}$	$9\overline{)\$6.39}$
4.	$9\overline{)738}$	$7\overline{)686}$	$9\overline{)369}$	$6\overline{)582}$	$7\overline{)437}$	$9\overline{)\$7.20}$
5.	$5\overline{)352}$	$9\overline{)814}$	$9\overline{)488}$	$8\overline{)507}$	$6\overline{)506}$	$9\overline{)\$5.67}$

Three Figures in the Quotient

1. Eight girls bought a package of notebook paper. There are 1000 sheets of paper in the package. The girls want to share the paper equally.

The division in the box shows how to find how many sheets each girl should get. Explain the division. It shows that each girl should get _____ sheets.

```
   125
8)1000
   8
   20
   16
    40
    40

CHECK
   125
   ×8
  1000
```

2. Explain these divisions and checks.

256 r3	584 r4	779
7)1795	8)4676	6)4674
14	40	42
39	67	47
35	64	42
45	36	54
42	32	54
3	4	
CHECK	CHECK	CHECK
256	584	779
×7	×8	×6
1792	4672	4674
+3	+4	
1795	4676	

Cover the divisions in Ex. 2 and work and check the same examples in Ex. 3.

3.

7)1795	8)4676	6)4674
CHECK	CHECK	CHECK

Divide. Check on a separate paper.

4.

9)6786	6)5070	5)4763

5.

8)5896	7)5089	4)2689

6.

8)4575	9)5879	7)6531

Dividing Money

1. Explain these divisions and checks.

$ 2.38 7)$16.66 14 26 21 56 56	CHECK $2.38 ×7 $16.66	$ 5.95 r1¢ 6)$35.71 30 57 54 31 30 1	CHECK $5.95 ×6 $35.70 +1 $35.71	$1.96 4)$7.84 4 38 36 24 24	CHECK $1.96 ×4 $7.84

2. Cover the divisions in Ex. 1. Work and check the same examples below.

7)$16.66	CHECK	6)$35.71	CHECK	4)$7.84	CHECK

Divide. Check on a separate paper.

	a	*b*	*c*	*d*	*e*
3.	6)$47.64	9)$21.54	5)$6.80	4)$3.41	7)$67.43
4.	7)$37.94	8)$35.79	9)$86.93	4)$7.84	6)$23.82

Zeros in the Quotient

1. Explain each of these divisions and checks.

\$ 7.05 7)\$49.35 49 3 0 35 35	CHECK \$7.05 ×7 \$49.35	\$ 9.40 6)\$56.40 54 24 24 0 0	CHECK \$9.40 ×6 \$56.40	\$ 8.06 r2¢ 8)\$64.50 64 5 0 50 48 2	CHECK \$8.06 ×8 \$64.48 +2 \$64.50

2. Cover the divisions in Ex. 1. Work and check the same examples below.

7)\$49.35	CHECK	6)\$56.40	CHECK	8)\$64.50	CHECK

Divide. Check on a separate paper.

3.				
6)\$42.30	7)\$32.20	8)7258	6)5883	9)7209
4.				
8)\$72.45	9)\$84.65	9)6842	7)5608	6)4816

Divide. Check on a separate paper.

	a	*b*	*c*	*d*	*e*
1.	$8\overline{)2474}$	$9\overline{)4052}$	$5\overline{)3765}$	$6\overline{)2873}$	$5\overline{)\$17.95}$
2.	$7\overline{)4959}$	$8\overline{)6408}$	$9\overline{)6845}$	$4\overline{)3873}$	$8\overline{)\$2.26}$

3. Six boys bought a tent. They paid $18.24 for it. They shared the cost equally. Each boy paid _____.

4. Four girls borrowed Mrs. Wood's sewing machine to make doll clothes. They broke a part of the machine and had to pay $5.20 to have it repaired. The girls shared the cost equally. Each one paid _____.

5. A baseball team of 9 boys spent $12.15 for baseball supplies. They shared the cost equally. Each boy paid _____.

6. Timmy bought a bicycle for $28.00. He is to pay for it in 8 equal monthly payments. Each month for 8 months he must pay _____.

3.	4.	5.	6.

A Test on Multiplication Facts

91

Multiply. Tell the answers. Then try to write them in 5 minutes.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*
1.	4	1	0	6	1	5	2	8	8	4	7
	5	4	3	3	8	9	6	0	3	2	7
	20	4	0	18	8	45	12	0	24	8	49
2.	4	8	9	9	7	0	6	5	1	2	1
	0	1	2	5	2	8	4	1	9	9	1
	0	8	18	45	14	0	24	5	9	18	1
3.	3	2	4	1	1	2	9	0	5	7	6
	8	4	6	5	6	7	0	9	2	4	9
	24	8	24	5	6	14	0	0	10	28	54
4.	9	5	6	8	9	2	6	1	2	3	6
	1	6	1	2	3	5	5	7	8	9	2
	9	30	6	16	27	10	30	7	16	27	12
5.	2	1	3	5	0	4	7	0	4	4	8
	1	0	3	7	4	7	1	6	3	9	6
	2	1X	9	35	4X	28	7	6X	12	36	48
6.	5	5	1	0	5	8	7	2	0	3	2
	5	8	2	1	0	4	5	2	0	1	3
	25	40	2	1X	5X	20	35	4	0	3	6
7.	2	3	0	4	3	3	4	1	0	5	7
	0	4	5	8	6	2	4	3	2	3	9
	2X	12	0X	32	18	6	16	3	2	15	63
8.	6	7	8	3	6	0	9	6	6	7	9
	6	0	8	5	8	7	9	0	7	8	7
	36	7X	64	15	48	7	81	6X	42	56	63
9.	9	7	7	8	8	3	9	8	4	5	9
	4	3	6	5	9	7	6	7	1	4	8
	36	21	42	40	72	21	54	56	4	20	72

See notes on page 3.

A Test on Division Facts

Divide. Tell the answers. Then try to write them in 4 minutes.

	a	*b*	*c*	*d*	*e*	*f*	*g*	*h*
1.	$2\overline{)4}$	$5\overline{)25}$	$3\overline{)6}$	$1\overline{)5}$	$2\overline{)16}$	$1\overline{)2}$	$2\overline{)10}$	$1\overline{)0}$
2.	$5\overline{)5}$	$1\overline{)6}$	$2\overline{)2}$	$5\overline{)30}$	$2\overline{)0}$	$4\overline{)12}$	$3\overline{)24}$	$1\overline{)9}$
3.	$2\overline{)14}$	$3\overline{)3}$	$5\overline{)40}$	$3\overline{)9}$	$2\overline{)6}$	$5\overline{)10}$	$1\overline{)8}$	$2\overline{)8}$
4.	$5\overline{)45}$	$4\overline{)24}$	$2\overline{)18}$	$2\overline{)12}$	$5\overline{)0}$	$3\overline{)18}$	$1\overline{)3}$	$5\overline{)20}$
5.	$3\overline{)15}$	$4\overline{)20}$	$8\overline{)0}$	$1\overline{)1}$	$3\overline{)21}$	$4\overline{)32}$	$5\overline{)15}$	$4\overline{)4}$
6.	$3\overline{)12}$	$6\overline{)6}$	$1\overline{)4}$	$4\overline{)8}$	$9\overline{)0}$	$4\overline{)16}$	$3\overline{)0}$	$1\overline{)7}$
7.	$6\overline{)18}$	$4\overline{)0}$	$5\overline{)35}$	$4\overline{)28}$	$6\overline{)0}$	$7\overline{)14}$	$7\overline{)35}$	$8\overline{)16}$
8.	$6\overline{)30}$	$8\overline{)24}$	$9\overline{)18}$	$6\overline{)36}$	$9\overline{)9}$	$8\overline{)40}$	$9\overline{)27}$	$9\overline{)45}$
9.	$9\overline{)72}$	$3\overline{)27}$	$6\overline{)12}$	$7\overline{)21}$	$9\overline{)36}$	$8\overline{)8}$	$6\overline{)24}$	$7\overline{)56}$
10.	$8\overline{)32}$	$4\overline{)36}$	$9\overline{)54}$	$8\overline{)72}$	$9\overline{)81}$	$6\overline{)54}$	$7\overline{)42}$	$8\overline{)64}$
11.	$7\overline{)49}$	$8\overline{)56}$	$7\overline{)63}$	$6\overline{)48}$	$9\overline{)63}$	$6\overline{)42}$	$8\overline{)48}$	$7\overline{)28}$

See notes on page 3.

Problem Test IV

1. Jean wants a Girl Scout uniform for $4.25, a belt for $.50, a neckerchief for $.50, and a beret for $1.10. All these things would cost _____.

2. John has $1.75. If he spends $.98 for a knife, he will have _____ left.

3. How many pieces of tape 6 inches long can be cut from 72 inches? _____

4. A dozen comic books at $.15 each cost _____.

5. A set of 8 books costs $12.80. The books cost _____ apiece.

6. To make a kite, Walter needs a strip of wood 24″ long and another strip 16″ long. He has a strip of wood 38″ long. Has he enough wood? _____

7. Joan has read 30 pages of a 240-page book. Is Joan $\frac{1}{8}$ of the way through the book? _____

8. Carl is reading "Secret Cargo." The book has 272 pages. Carl has read through page 189. He has _____ more pages to read.

9. 35 balls at 5¢ each cost _____.

10. For 45¢ Janet can buy _____ 6-cent oranges, and and she will have _____¢ left over.

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

1. $40 + 8 =$ ____ **2.** $30 + 6 =$ ____
$40 - 8 =$ ____ $30 - 6 =$ ____
$40 \times 8 =$ ____ $30 \times 6 =$ ____
$40 \div 8 =$ ____ $30 \div 6 =$ ____

3. $35 + 7 =$ ____ **4.** $81 + 9 =$ ____
$35 - 7 =$ ____ $81 - 9 =$ ____
$35 \times 7 =$ ____ $81 \times 9 =$ ____
$35 \div 7 =$ ____ $81 \div 9 =$ ____

5. Write the missing numbers:

12,847		
		12,852

6. Color $\frac{3}{5}$ of this circle.

7. $\frac{1}{9}$ of 63 = ____ $\frac{1}{8}$ of 64 = ____
$\frac{1}{5}$ of 25 = ____ $\frac{1}{7}$ of 28 = ____
$\frac{1}{6}$ of 48 = ____ $\frac{1}{4}$ of 40 = ____

Write only the answers when you do the divisions in Exs. 8 to 11.

8. $2\overline{)84}$ $3\overline{)90}$ $4\overline{)840}$

9. $2\overline{)188}$ $2\overline{)164}$ $4\overline{)248}$

10. $3\overline{)75}$ $3\overline{)132}$ $3\overline{)168}$

11. $2\overline{)98}$ $4\overline{)212}$ $4\overline{)336}$

12.

56	34	27
$\times 9$	$\times 8$	$\times 7$

13.

\$1.24	\$2.08	\$4.69
$\times 6$	$\times 7$	$\times 5$

14.

94	28	28
$\times 67$	$\times 64$	$\times 83$

15. $8\overline{)75}$ $9\overline{)68}$ $6\overline{)50}$

16. $6\overline{)363}$ $8\overline{)560}$ $9\overline{)723}$

17. $5\overline{)\$1.25}$ $6\overline{)\$2.70}$ $8\overline{)\$3.76}$

18. $7\overline{)\$7.42}$ $9\overline{)\$47.70}$ $8\overline{)\$64.56}$

19. Take the tests on pages 3, 7, 70, and 71 again today.

Review Practice

1.
$$\begin{array}{r} 478 \\ 653 \\ 298 \\ 427 \\ \hline \end{array} \qquad \begin{array}{r} \$5.64 \\ .39 \\ .87 \\ 4.69 \\ \hline \end{array} \qquad \begin{array}{r} \$3.24 \\ 5.67 \\ .89 \\ .73 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 354 \\ -198 \\ \hline \end{array} \qquad \begin{array}{r} 506 \\ -289 \\ \hline \end{array} \qquad \begin{array}{r} \$6.00 \\ -2.54 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 204 \\ \times 6 \\ \hline \end{array} \qquad \begin{array}{r} 354 \\ \times 8 \\ \hline \end{array} \qquad \begin{array}{r} 29 \\ \times 67 \\ \hline \end{array}$$

4. $8\overline{)67}$ $9\overline{)74}$ $8\overline{)96}$

5. $9\overline{)315}$ $8\overline{)640}$ $9\overline{)542}$

6. $6\overline{)4836}$ $8\overline{)5840}$ $7\overline{)\$4.83}$

Progress Test IV

1.
$$\begin{array}{r} 89 \\ \times 76 \\ \hline \end{array}$$

2. $9\overline{)545}$

3.
$$\begin{array}{r} \$2.87 \\ \times 9 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 908 \\ \times 6 \\ \hline \end{array}$$

5. $\frac{1}{8}$ of 464 = _____

6. Eight girls had a cooky sale and made $1.36. If they share their earnings equally, each girl will get _____.

5. _____

6. _____

7. $7\overline{)4956}$

8. $6\overline{)\$17.40}$

9. Find the cost of 3 pairs of woolen socks at $1.98 a pair. _____

10. How much will 25 air-mail stamps cost at 5¢ apiece? _____

9. _____

10. _____

Number of answers correct: _____ Date: _____ _____, _____

1. Learn this rhyme.

Thirty days have September,
April, June, and November.

You will need to remember also that all the other months have 31 days, except February. February has 28 days except in leap year, when it has 29 days. Leap year comes once every four years.

2. The year 1952 is a leap year. You can show this by dividing 1952 by 4. There is no remainder. There is never any remainder when you divide a leap year by 4.

$4\overline{)1952}$

Show that 1956, 1960, and 1964 are leap years.

$4\overline{)1956}$ $4\overline{)1960}$ $4\overline{)1964}$

3. What year is this? _____ Is this a leap year? (Do a division in the box to find out.)

$4\overline{)}$

4. How many days are in February this year? _____

5. Name the months of the year in order. How many are there? _____

6. How many days are there in a week? _____ Name the days of the week in order.

7. In the table below write the names of the months in order, and the number of days in each month this year.

Name of Month	Number of Days
January	31
February	

8. Polly says she can use the table in Ex. 7 to find how many days there are in this year. How can she do that?

_____

Time Can Be Measured

1. Learn these facts about time.

60 seconds (sec.)	= 1 minute
60 minutes (min.)	= 1 hour
24 hours (hr.)	= 1 day
7 days (da.)	= 1 week
52 weeks (wk.)	= 1 year
365 days	= 1 year
366 days	= 1 leap year
12 months (mo.)	= 1 year

Write the missing numbers.

2. April has ____ wk. and ____ da.
3. June has ____ wk. and ____ da.
4. July has ____ wk. and ____ da.
5. January has ____ wk. and ____ da.
6. March has ____ wk. and ____ da.
7. August has ____ wk. and ____ da.

8. 1 year = ____ wk. 1 year = ____ da. 1 year = ____ mo.
9. 2 weeks = ____ da. 1 day = ____ hr. 1 min. = ____ sec.
10. 1 hr. = ____ min. $\frac{1}{2}$ hr. = ____ min. $\frac{1}{4}$ hr. = ____ min.

11. Marcia said, "If there are 7 days in a week and 365 days in a year, then you can find how many weeks there are in a year by finding how many 7's there are in 365."

Marcia says the division in the box shows that in a year there are ____ weeks and ____ day left over.

$$\begin{array}{r} 52 \text{ r1} \\ 7\overline{)365} \\ 35 \\ \hline 15 \\ 14 \\ \hline 1 \end{array}$$

12. In a leap year there would be ____ weeks and ____ days left over.

13. When we tell how many weeks are in a year, we say "____." We do not mention the day left over.

14. Sometimes we say there are 4 weeks in a month. Is that always exactly true? ____ Is that ever exactly true? ____

Number Puzzles

A number is missing in each division below. Fill in each missing number.

$$\begin{array}{r} 7 \\ 8\overline{)5} \end{array} \qquad \begin{array}{r} 6 \\ 8\overline{)\ 8} \end{array} \qquad \begin{array}{r} 9 \\ )72 \end{array} \qquad \begin{array}{r} 8 \\ 8\overline{)6} \end{array} \qquad \begin{array}{r} 4 \\ 8\overline{)3} \end{array} \qquad \begin{array}{r} 5 \\ 8\overline{)\ 0} \end{array}$$

Mr. Bennett pays the children in his neighborhood 8¢ a quart for picking berries.

1. Look at the table in Ex. 7. It shows that Mary P. picked _____ qt. of berries; Jack S. picked _____ qt.; Lois R. picked _____ qt.; Jim T. picked _____ qt. Write at the bottom of the second column the total number of quarts picked.

2. Mary P. picked 9 quarts at 8¢ a quart. She earned _____¢ in all.

3. Under "Amount Earned" write how much each of the other children earned. At the bottom of the column, write the total amount earned by all.

4. When Mr. Bennett was ready to pay the children, he had a 5-dollar bill and two 1-dollar bills. He had _____ dollars in all, but he couldn't pay the children. Why not?

5. Mr. Bennett went to the bank to get the right coins and dollar bills to pay the children. For Mary P. he needed 72¢. He needed _____ half dollar, _____ dimes, and _____¢.

6. For Jack S. he needed 1 _____ and 2 _____. On the line with Jack's name, write 1 in the dollars column and 2 in the dimes column. Write in the table the smallest number and kind of coins needed for each child.

7. Write at the bottom of the table the total number of each kind of coin needed.

Name	No. of Quarts Picked	Amount Earned	Coins Needed to Pay Each Child					
			Dollars	Half Dollars	Quarters	Dimes	Nickels	Pennies
Mary P.	9	$.72		1		2		2
Jack S.	15							
Lois R.	16							
Jim T.	26							
Total								

8. All together Mr. Bennett got _____ dollar bills, _____ half dollar, _____ quarter, _____ dimes, _____ nickel, and _____ pennies.

Practice in Multiplying

Multiply and check by going over your work.

1.	$2.09 × 9	$1.34 × 8	$7.84 × 7
2.	$3.34 × 6	$9.09 × 5	$1.29 × 4
3.	$9.38 × 3	$9.38 × 9	$2.25 × 8
4.	$6.95 × 7	$4.25 × 6	$8.18 × 5
5.	$8.47 × 4	$8.47 × 9	$3.16 × 8
6.	$5.06 × 7	$5.16 × 6	$7.27 × 5
7.	$7.56 × 4	$5.06 × 9	$4.07 × 8
8.	$4.17 × 7	$6.07 × 6	$6.30 × 5
9.	$7.65 × 9	$5.98 × 8	$3.28 × 7
10.	$7.98 × 6	$5.40 × 5	$6.74 × 9
11.	$.67 × 78	$.39 × 67	$.98 × 56
12.	$.83 × 95	$.92 × 89	$.89 × 78

13. Three pairs of shoes at $3.49 a pair will cost _____.

14. How much will Jean's father have to pay to stay at a hotel for a week if the charge is $1.75 a day? _____

15. How many days are there in 2 years? _____

16. If Jim earns $15 a month, how much does he earn in a year? _____

13.	14.
15.	16.

1. The total cost of a 5-cent candy bar, a 6-cent ice-cream cone, and a 1-cent stick of gum is $5¢ + 6¢ + 1¢$, or _____¢.

To find the total cost of a number of things bought at different prices, you add.

2. The total cost of a 5-cent ruler, a 4-cent pencil, and an 8-cent eraser is _____¢.

3. If you buy a 2-cent paper and give the paper boy a nickel, your change is $5¢ - 2¢$, or _____¢.

To find the amount of change you should get, you subtract.

4. How much change should you get from a quarter when you buy a 10-cent whistle? _____

5. The cost of six 2-cent stamps is $6 \times 2¢$, or _____¢.

When you know the cost of 1 thing, to find the cost of any number of those things, you multiply.

6. The cost of eight 5-cent air-mail stamps is _____¢.

7. The cost of nine 6-cent ice-cream cones is _____¢.

8. Marie needs 8 sheets of paper to make one booklet. Out of 16 sheets she can make $16 \div 8$, or _____ booklets.

When you know how many things are in one group, to find how many of those groups you can get out of a larger number, you divide.

9. 18 socks = _____ pairs of socks.

10. Peter wants to buy a 10-cent whistle. He has only 6¢. He needs $10¢ - 6¢$, or _____¢ more.

To find how many more you need, you subtract.

11. Tom has 8¢. To buy a 15-cent ticket, he needs _____¢ more.

12. A cake costs 12¢. If 2 boys share the cost equally, each boy should pay $\frac{1}{2}$ of $12¢$, or $12¢ \div 2$, or _____¢.

When a number of persons wish to share the cost equally, to find each person's share of the cost, you divide.

13. If 6 boys share equally the cost of a 48-cent watermelon, each boy should pay _____¢.

1. There are 7 days in one week. In two weeks there are 2×7 days, or _____ days. In three weeks there are 3×7 days, or _____ days. In four weeks there are 4×7 days, or _____ days.

When you know how many there are in one group, to find how many there are in any number of those groups, you multiply.

2. There are 3 feet in one yard. In 2 yards there are _____ feet. In 8 yards there are _____ feet.

3. In a classroom there are 6 rows of seats. There are 5 seats in each row. In all there are _____ seats.

---

4. Don earned 10¢. Joe earned 15¢. The difference between the amounts they earned is 15¢ – 10¢, or _____¢.

To find the difference between two numbers, you subtract.

5. Jane is 65 inches tall. Betty is 55 inches tall. The difference between their heights is _____ inches.

6. The difference in length between an inch and a foot is _____ inches.

7. Chalk is sold in boxes with 3 sticks in each box. If you need 6 sticks, you should buy $6 \div 3$, or _____ boxes. If you need 15 sticks, you should buy $15 \div 3$, or _____ boxes.

If you know how many articles there are in one package and how many articles you need all together, to find how many packages you need, you divide.

8. If there are 6 rolls in one package, to get 24 rolls, you should buy _____ packages.

---

9. Bob has 24 fishhooks. If he divides them equally among 8 boys, each boy will get $24 \div 8$, or _____ hooks.

If you know how many articles you have and how many parts you want to divide the articles into, to find how many articles there will be in each part, you divide.

10. Seven boys found 49 nuts. If they share them equally, each boy will get _____ nuts.

11. If Ann divides 18 caramels equally among 3 girls, each girl will get _____ caramels.

Work these problems carefully. Check your work. Look to see if each answer is sensible.

1. The total cost of a 25-cent ball, a 15-cent top, and a 35-cent puzzle is _____.

2. How much change should Doris get from a half dollar when she buys a doll for 29¢? _____

3. Six towels at $.39 each cost _____.

4. Marie needs 8 sheets of paper to make one booklet. She has 96 sheets of paper. How many booklets can she make? _____

5. Peter wants to know the 100 multiplication facts. He knows 87 facts. He has _____ more facts to learn.

6. Five boys want to buy a croquet set. It costs $5.75. If they share the cost equally, each boy should pay _____.

7. There are 80 paper napkins in a package. If Marie buys 5 packages, she will get _____ paper napkins.

8. David can get a new radio for $19.98 or a second-hand one for $9.50. What is the difference between the prices? _____

9. Carol needs 72 cupcakes to serve at a class party. The cakes come 6 to a package. She will need to buy _____ packages.

10. A school principal has 150 free tickets to a movie. He wants to divide them equally among the 6 classrooms in the school. How many tickets should he give to each room? _____

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

Estimating Answers

Three answers are given to each problem on this page. One of the three answers is right. Draw a line around each right answer.

Do not use a pencil to work any of the problems. Just figure out " in your head " which answer is sensible.

1. Jane has a Dime Bank. When it is filled, she will have $5.00. How many dimes does it take to fill her bank?

5 50 500

2. Roy wants to buy a compass for $.98, an ax for $1.35, and a flashlight for $1.98. How much will all three things cost?

$4.31 $3.31 $2.31

3. Larry has a 5-dollar bill. If he buys a woodsman's ax for $3.98, how much change will he get?

$1.02 $2.02 $3.02

4. Tom is going to give a magnifying glass to each of his 4 best friends for Christmas. The glasses cost 49¢ each. How much will the 4 glasses cost?

$2.96 $.96 $1.96

5. Peter is going to camp. He needs to buy a laundry bag at $1.49 and a duffel bag at $2.98. How much will both bags cost?

$3.47 $3.98 $4.47

6. Herbert wants to buy an aluminum canteen. It costs $1.50. He has $.82. How much more does he need?

$.68 $.78 $.88

7. Tom needs to buy 144 rolls for a club picnic. The rolls come 8 in a package. How many packages should he buy?

10 38 18

8. Grace finds she needs 108 in. of ribbon to bind a blanket. How many yards of ribbon should she buy?

2 3 4

9. How many feet are there in 30 yards?

10 90 360

10. In a theater there are 25 rows of seats. There are 40 seats in each row. How many seats are there in the theater?

100 1,000 10,000

A Page of Practice

Find these sums and check.

1. $5 + $2.25 + $3.47
2. $.67 + $7 + $2.49
3. $6 + $.39 + $.75
4. $8 + $7 + $.54

1.	2.	3.	4.

Find the difference between the numbers in each pair below. Check your answers

5. 375 500
6. 603 250
7. 730 89
8. 546 208

5.	6.	7.	8.

Multiply. Check by going over your work.

9. 8 times 754
10. 9 times 208
11. 6 times 144
12. 7 times 800

9.	10.	11.	12.

Divide and check.

13. 704 ÷ 8
14. 6354 ÷ 9
15. $17.52 ÷ 6
16. $39.69 ÷ 7

13.	14.	15.	16.

1. Molly helps her mother do the ironing each week. She times herself and finds she can iron 2 handkerchiefs in a minute.

In 2 minutes she can iron 2 × 2 hankies, or _____ hankies.

In 3 min. she can iron _____ hankies.

In 4 min. she can iron _____ hankies.

In 5 min. she can iron _____ hankies.

In 6 min. she can iron _____ hankies.

2. Dan is helping his father spray fruit trees. They can spray 8 trees in an hour.

In 2 hours they can spray 2 × 8 trees, or _____ trees.

In 3 hours they can spray _____ trees.

In 4 hours they can spray _____ trees.

3. An electric machine can punch holes in paper at the rate of 50 holes a minute.

In 2 min. it can punch _____ holes.

In 3 min. it can punch _____ holes.

In 5 min. it can punch _____ holes.

In 8 min. it can punch _____ holes.

4. David can pick 4 quarts of strawberries in an hour.

In 2 hours he can pick _____ qt.

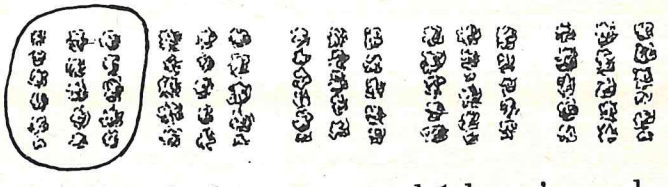
In 3 hours he can pick _____ qt.

5. Sue can do 4 addition examples in a minute. In 5 minutes she can do _____ examples.

6. Paul can hoe 3 rows of potatoes in an hour. In 3 hours he can hoe _____ rows.

7. Paul can hoe 3 rows of potatoes in an hour. He wonders how long it will take him to hoe 15 rows.

Here are the 15 rows of potatoes.



A line is drawn around 1 hour's work. Draw a line around the next hour's work; around each hour's work. The drawing shows that to hoe 15 rows will take Paul 15 ÷ 3, or _____ hours.

To hoe 12 rows will take _____ hours.

To hoe 18 rows will take _____ hours.

8. The baker has a machine that can slice bread at the rate of 9 loaves a minute.

To slice 18 loaves takes _____ min.

To slice 27 loaves takes _____ min.

To slice 36 loaves takes _____ min.

To slice 54 loaves takes _____ min.

To slice 63 loaves takes _____ min.

1. Roy rides his bicycle at the rate of 8 miles an hour.

In 2 hours he goes 2×8 miles, or _____ miles.

In 3 hours he goes _____ miles.

2.

1 hr.	1 hr.	1 hr.
40 mi.	40 mi.	40 mi.

Look at the picture above and think, " If a car goes at the rate of 40 mi. an hour, in 3 hours it will go 3×40 mi., or _____ mi."

In 2 hr. it will go _____ mi.

In 4 hr. it will go _____ mi.

In 5 hr. it will go _____ mi.

3. A fast airplane traveled at the rate of 6 miles a minute.

In 2 min. it went _____ mi.

In 3 min. it went _____ mi.

In 10 min. it went _____ mi.

In 20 min. it went _____ mi.

In 30 min. it went _____ mi.

In 1 hr. it went _____ mi.

4. A fast train traveled at the rate of 60 mi. an hour.

In 2 hr. it went _____ mi.

In 3 hr. it went _____ mi.

In 4 hr. it went _____ mi.

In 5 hr. it went _____ mi.

5. Hiking at the rate of 4 mi. an hour, a boy could hike _____ mi. in 2 hr.

In 3 hr. he could hike _____ mi.

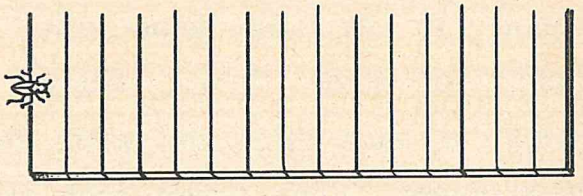
In 4 hr. he could hike _____ mi.

6. A boat going 15 miles an hour can go _____ miles in 4 hours.

7. Traveling at 30 miles an hour, a jeep can go _____ miles in 5 hours.

8. Dan timed a bug crawling across the back porch. The bug crawled across 3 boards in a minute. At that rate, Dan wondered how long it would take the bug to crawl across 15 boards to the edge of the porch.

Here are the 15 boards in the porch floor, and the bug is starting across.



In 1 min. he will cross ____ boards.

In 2 min. he will cross ____ boards.

In ____ min. he will cross 9 boards.

In ____ min. he will cross 12 boards.

In ____ min. he will cross 15 boards.

9. Walking at the rate of 5 miles an hour, how long will it take Roger to go 15 miles? _____

A Page of Measuring

1. Be sure you know these tables.

16 **ounces** (**oz.**) = 1 **pound** (**lb.**)
2000 **pounds** (**lb.**) = 1 **ton** (**T.**)

---

2 **pints** (**pt.**) = 1 **quart** (**qt.**)
4 **quarts** (**qt.**) = 1 **gallon** (**gal.**)

---

12 **inches** (**in.**) = 1 **foot** (**ft.**)
3 **feet** (**ft.**) = 1 **yard** (**yd.**)
36 **inches** (**in.**) = 1 **yard** (**yd.**)
5280 **feet** (**ft.**) = 1 **mile** (**mi.**)

2. Write the names of three things that are sold by the pound.

_____ _____ _____

3. Write the names of three things that are sold by the ton.

_____ _____ _____

4. Have you scales in your classroom? In the table below write the names of some things. Guess the weight of each thing and write down your guess. Then weigh each thing and write down its real weight.

Thing Weighed	Guess	Weight

5. Name something that is about a mile from your school. _____

6. Walk a mile. How long does it take? _____

7. Have you a bicycle? If so, ride a mile. How long does it take? _____

8. In New York City, Jane walked along Fifth Avenue from 92nd Street to 72nd Street. She walked _____ blocks. She walked a mile.

Do you live in a city? If so, how many blocks do you walk to walk a mile? _____

9. In the table below write down some distances in your classroom such as "From the door to the table." Guess the length of that distance. Write down your guess. Then measure the distance. Write down the real distance. The first line in the table shows you how.

From	To	Guess	Real Distance
Door	Table	6 ft.	5 ft. 8 in.

Write the missing numbers.

1. 1 qt. = ___ pt.
   1 gal. = ___ qt.
   1 yd. = ___ in.
   1 yd. = ___ ft.

2. 1 ft. = ___ in.
   1 mi. = ___ ft.
   1 T. = ___ lb.
   1 lb. = ___ oz.

3. $\frac{1}{4}$ lb. = ___ oz.
   $\frac{1}{2}$ lb. = ___ oz.
   $\frac{1}{8}$ lb. = ___ oz.
   $\frac{1}{2}$ T. = ___ lb.

4. $\frac{1}{4}$ yd. = ___ in.
   $\frac{1}{2}$ yd. = ___ in.
   $\frac{1}{3}$ yd. = ___ in.
   $\frac{1}{6}$ yd. = ___ in.

5. 1 yd. = ___ ft.
   2 yd. = ___ ft.
   3 yd. = ___ ft.
   4 yd. = ___ ft.

6. 9 ft. = ___ yd.
   12 ft. = ___ yd.
   15 ft. = ___ yd.
   18 ft. = ___ yd.

7. 1 qt. = ___ pt.
   5 qt. = ___ pt.
   6 qt. = ___ pt.
   8 qt. = ___ pt.

8. 10 pt. = ___ qt.
   12 pt. = ___ qt.
   18 pt. = ___ qt.
   20 pt. = ___ qt.

9. 1 gal. = ___ qt.
   3 gal. = ___ qt.
   5 gal. = ___ qt.

10. 8 qt. = ___ gal.
    16 qt. = ___ gal.
    28 qt. = ___ gal.

11. 1 hr. = ___ min.
    $\frac{1}{2}$ hr. = ___ min.
    $\frac{1}{4}$ hr. = ___ min.
    $\frac{1}{6}$ hr. = ___ min.

12. 1 wk. = ___ da.
    1 yr. = ___ wk.
    1 yr. = ___ da.
    1 yr. = ___ mo.

Draw a line around the larger amount in each pair.

13.

1 qt.	3 pt.
1 yd.	2 ft.
2 gal.	10 qt.
$\frac{1}{2}$ lb.	10 oz.

14.

1 hr.	75 min.
5 wk.	37 da.
$\frac{1}{2}$ yr.	5 mo.
1 yr.	48 wk.

Draw a line around the most sensible answer in Exs. 15 to 20.

15. How tall is Bill's teacher?
25 in. 5 ft. 5 yd.

16. How far did the Scouts walk on their all-day hike?
20 mi. 2 mi. 280 mi.

17. How much milk did the eight Davis children drink for their supper?
4 pt. 12 qt. 4 gal.

18. How much material does Rose, who is 9 years old, need for a dress?
$\frac{1}{2}$ yd. 3 yd. 9 yd.

19. How tall was the circus dwarf?
6 in. 2 yd. 3 ft.

20. How long does it take to walk a mile?
1 hr. 45 min. 15 min.

21. Bill has an 8-ounce weight, a 4-ounce weight, and a 2-ounce weight. If he puts the three weights on one side of a scale and a pound of sugar on the other side of the scale, will the scale balance? ___

A Page of Practice

Add and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	\$4.75	\$4.83	\$6.76	\$8.93	\$2.53	\$7.84
	8.62	2.91	8.29	6.94	.87	6.75
	9.57	6.05	3.54	2.87	.69	9.87
	6.53	.73	7.61	3.56	7.54	3.46
	.29	5.00	5.47	4.33	9.83	.95

Subtract and check.

2.	475	956	907	894	\$2.84	\$5.49
	283	487	838	673	.56	2.08
3.	406	954	300	976	\$6.00	\$5.00
	283	760	254	89	1.93	2.47

Multiply. Check by going over your work.

4.	284	375	278	504	\$ .76	\$2.74
	8	6	9	7	9	8
5.	24	57	73	96	\$ .87	\$ .36
	36	65	84	25	75	94

Divide. Check on a separate sheet of paper.

6.	$7\overline{)278}$	$6\overline{)574}$	$5\overline{)473}$	$8\overline{)794}$	$9\overline{)\$81.00}$	$4\overline{)\$3.52}$
7.	$6\overline{)475}$	$7\overline{)876}$	$8\overline{)6472}$	$5\overline{)390}$	$4\overline{)\$3.04}$	$9\overline{)\$8.46}$

1. Find the cost of two 3-cent stamps and a 5-cent air-mail stamp.

1st step: Cost of 3-cent stamps = $2 \times 3¢ =$ _____¢.

2nd step: Total cost of stamps = $6¢ + 5¢ =$ _____¢.

2. Mary bought 6 post cards for 25¢. She sold them for 5¢ each. How much money did she make?

1st step: Sold cards for $6 \times 5¢$, or _____¢.

2nd step: She made $30¢ - 25¢$, or _____¢.

3. How much change will Jim get from a quarter if he buys four 6-cent apples?

1st step: Apples will cost $4 \times 6¢$, or _____¢.

2nd step: Change equals $25¢ - 24¢$, or _____¢.

4. Jane has a quarter and 7 pennies. How many 8-cent tickets can she buy?

1st step: Jane has $25¢ +$ _____¢, or _____¢.

2nd step: She can buy $32 \div 8$, or _____ tickets.

5. Alice has 4 packages of chewing gum with 6 sticks in each package. If she divides the gum equally among 8 girls, how many sticks will each girl get?

1st step: Alice has $4 \times$ _____ sticks, or _____ sticks.

2nd step: Each girl will get $24 \div 8$, or _____ sticks.

6. John bought 3 green pencils and 5 red pencils at 5¢ each. How much did the pencils cost?

1st step: He bought $3 + 5$, or _____ pencils.

2nd step: They cost $8 \times 5¢$, or _____¢.

7. Tom had 6 white rabbits and 8 brown rabbits. He gave 9 rabbits away. How many were left?

1st step: He had at first _____ + _____, or _____ rabbits.

2nd step: He had left _____ – _____, or _____ rabbits.

8. John had 80 soap wrappers. He sent away 60 to get a magnet. Then he divided the wrappers he had left equally among 5 of his friends. How many wrappers did each friend get?

1st step: After he sent away 60 wrappers, he had left 80 – 60, or _____ wrappers.

2nd step: Each friend got ____ ÷ ____, or _____ wrappers.

Two-Step Problems

1. Mary had 17¢. She lost 9¢. Then she earned a nickel. How much did she have then?

1st step: After she lost 9¢, she had left _____¢ − _____¢, or _____¢.
2nd step: After she earned 5¢, she had _____¢ + _____¢, or _____¢.

2. Tim bought a quarter's worth of candy bars at 5¢ each. Then he gave Jane 2 of the bars. How many bars did he have left?

1st step: He bought _____ ÷ _____, or _____ bars.
2nd step: He had left _____ − _____, or _____ bars.

3. How much change did Diana get from a quarter after buying $\frac{1}{2}$ pound of popcorn at 20¢ a pound?

1st step: Popcorn cost _____¢ ÷ _____, or _____¢.
2nd step: Change equals _____¢ − _____¢, or _____¢.

4. Peter bought $\frac{1}{4}$ lb. of "hot dogs" at 36¢ a pound and a package of rolls for 10¢. How much did he spend in all?

1st step: Hot dogs cost _____¢ ÷ _____, or _____¢.
2nd step: He spent _____¢ + _____¢, or _____¢.

Number Puzzles

Write the answers to the multiplications below. Add the 2 figures in each answer. You will be surprised to find that the sum is always _____. Two examples are done for you.

1. $9 \times 2 =$ 18	1 + 8 = 9		5. $9 \times 6 =$ 54	5 + 4 = 9	
2. $9 \times 3 =$ ____	____ + ____ = ____		6. $9 \times 7 =$ ____	____ + ____ = ____	
3. $9 \times 4 =$ ____	____ + ____ = ____		7. $9 \times 8 =$ ____	____ + ____ = ____	
4. $9 \times 5 =$ ____	____ + ____ = ____		8. $9 \times 9 =$ ____	____ + ____ = ____	

Two-Step Problems

1. Marie bought 2 barrettes at 15¢ each, and a comb for 29¢. How much did she spend in all?

1st step: Barrettes cost 2 × _____¢,
or _____¢.

2nd step: Spent in all _____¢ + _____¢,
or _____¢.

2. How much change will Herman get from a dollar after buying 3 pairs of socks at 29¢ a pair?

1st step: Socks cost _____ × _____,
or _____.

2nd step: Change equals _____ − _____,
or _____.

3. James paid $1.00 for 24 greeting cards. He sold them at 5¢ each. How much money did he earn?

1st step: Sold cards for _____ × _____,
or _____.

2nd step: He earned _____ − _____,
or _____.

4. Find the total cost of $\frac{1}{2}$ yard of gingham at 48¢ a yard, and a 15-cent card of buttons.

1st step: Gingham cost _____ ÷ _____,
or _____.

2nd step: Total cost = _____ + _____,
or _____¢.

5. Jerry had $4.28. He spent $1.79 for a baseball glove. Then his aunt sent him $2.00 for his birthday. How much money did he have then? _____

6. Peter's father has 8 gallons of maple syrup. If he sells it at $.75 a quart, he will get _____ for it.

7. Kenneth needs 48 feet of rubber hose. At $.65 a yard, how much will the hose cost? _____

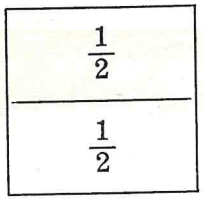
8. Jane bought 3 yards of red bunting, 3 yards of white bunting, and 3 yards of blue bunting to decorate for the Fourth of July. At $.19 a yard, the bunting cost _____.

WORK SPACE

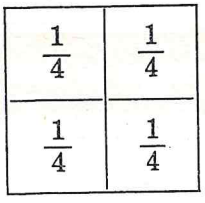
Fractions

1. Joan, Nan, and Molly each have a sheet of paper exactly the same size.

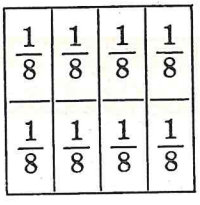
Joan's is red and cut into _____ halves. Nan's is green and cut into _____ fourths. Molly's is yellow and cut into _____ eighths.



JOAN'S



NAN'S



MOLLY'S

2. If Joan trades $\frac{1}{2}$ sheet of her red paper for some of Nan's green paper, Nan will give Joan _____ fourths of her sheet. $\frac{1}{2} = \frac{2}{4}$

3. If Joan trades $\frac{1}{2}$ sheet of her red paper for some of Molly's yellow paper, Molly will give Joan _____ eighths of her sheet. $\frac{1}{2} = \frac{4}{8}$

4. If Nan trades $\frac{1}{4}$ sheet of her green paper for some of Molly's yellow paper, Molly will give Nan _____ eighths of her sheet. $\frac{1}{4} = \frac{2}{8}$

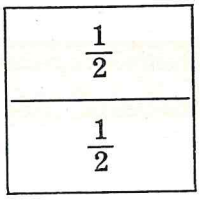
5. What part of her sheet of yellow paper will Molly give Nan for $\frac{3}{4}$ sheet of green paper? _____

6. $\frac{1}{4} = \frac{\quad}{8}$ $\frac{1}{2} = \frac{\quad}{8}$ $\frac{1}{2} = \frac{\quad}{4}$ $1 = \frac{\quad}{2}$

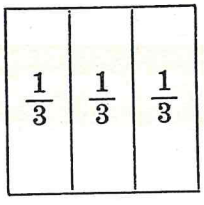
$1 = \frac{\quad}{4}$ $1 = \frac{\quad}{8}$ $\frac{2}{4} = \frac{\quad}{8}$ $\frac{3}{4} = \frac{\quad}{8}$

7. Bill, Don, and Bob each have a sheet of paper exactly the same size.

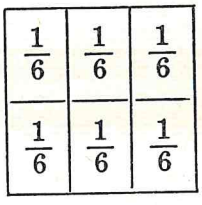
Bill's is orange and cut into _____ halves. Don's is purple and cut into _____ thirds. Bob's is blue and cut into _____ sixths.



BILL'S



DON'S



BOB'S

8. If Bill trades $\frac{1}{2}$ sheet of his orange paper for some of Bob's blue paper, Bob will give Bill _____ sixths of his sheet. $\frac{1}{2} = \frac{3}{6}$

9. If Don trades $\frac{1}{3}$ sheet of his purple paper for some of Bob's blue paper, Bob will give Don _____ sixths of his sheet. $\frac{1}{3} = \frac{2}{6}$

10. What part of his sheet of blue paper will Bob have to give Don for $\frac{2}{3}$ sheet of purple paper? _____

11. $1 = \frac{\quad}{3}$ $1 = \frac{\quad}{2}$ $1 = \frac{\quad}{6}$

$\frac{1}{3} = \frac{\quad}{6}$ $\frac{1}{2} = \frac{\quad}{6}$ $\frac{2}{3} = \frac{\quad}{6}$

12. Draw a line around the larger fraction in each pair.

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{8}$ $\frac{1}{4}$ $\frac{1}{8}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{5}{8}$

1. Place commas in these numbers. Then read them.

3587	20864	507983	12406	50973	20080
3765	28407	86009	7009	10075	386040

2. Your teacher will dictate some numbers for you to write. Remember that when she says " thousand " you write a comma. Always write 3 more figures after the comma.

_____ _____ _____ _____ _____ _____

Write the missing numbers. You are counting by 1's.

3.	86,548				86,552
4.	99,997				100,001

Write the missing numbers. You are counting by 10's.

5.	9,670				9,710
6.	957				997

Write the missing numbers. You are counting by 100's.

7.	23,800				24,200
8.	112,100				112,500

Write the missing numbers. You are counting by 1,000's.

9.	7,460				11,460
10.	117,000				121,000

Write the missing numbers. You are counting by 10,000's.

11.	70,000	80,000			110,000
12.	110,000				150,000

Write the missing numbers. You are counting by 100,000's.

13.	100,000	200,000			500,000
14.	500,000	600,000			

Buying Groups of Things

1. Cupcakes sell at 2 for 5¢. Jean wonders how much 8 cupcakes will cost her. Here are the 8 cakes.

5¢

A line is drawn around the first two cakes. They cost _____¢.

Draw a line around each group of 2 cakes. How many groups are there? _____

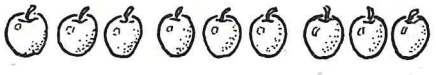
If each group of 2 cakes costs 5¢, the 4 groups will cost $4 \times 5¢$, or _____¢.

8 cakes will cost _____¢.

2. Write the missing numbers in this table.

No. of Cakes Bought	2	4	6	10	14	18
Cost of Cakes	5¢					

3. Draw lines on this picture to help you find the cost of 9 apples selling at 3 for 10¢.



Your drawing shows that 9 apples will cost _____ × 10¢, or _____¢.

4. Write the missing numbers.

No. of Apples Bought	3	6	12	18	24	21
Cost of Apples	10¢					

5. When carrots sell at 2 bunches for 13¢, 4 bunches cost _____¢.

6. When apples are selling at 4 pounds for a quarter, 8 pounds will cost _____¢.

7. Popcorn balls sell at 2 for a nickel. Larry had 35¢. He wondered how many popcorn balls he could buy.

He thought, "35¢ = _____ nickels. For 1 nickel I can get _____ balls. For 7 nickels I can get _____ × 2 balls, or _____ balls."

8. Write the missing numbers.

Amount of Money to Spend	5¢	10¢	20¢	30¢	45¢
No. of Popcorn Balls I Can Get	2				

9. When pencils sell at 3 for a dime, to find how many pencils you can get for 40¢, think:

40¢ = _____ dimes. If I can get 3 pencils for 1 dime, for 4 dimes I can get _____ × _____ pencils, or _____ pencils.

10. Write the missing numbers.

Amount of Money to Spend	10¢	20¢	50¢	70¢	90¢
No. of Pencils I Can Get	3				

Problem Test V

1. Tommy has $4.00. If he buys a wrist watch for $2.69, how much will he have left? _____

2. Six girls want to buy a soft ball. It costs $.78. If they share the cost equally, each girl should pay _____.

3. Penny bought a pair of roller skates at a sale for $2.98. The regular price of the skates was $3.49. She saved _____ by buying the skates at the sale.

4. When pencils are selling at 2 for a nickel, how many pencils can you get for a quarter? _____

5. Larry wants to buy a fishing rod marked $3.29. Larry has only $2.75. How much more money does he need? _____

6. Find the cost of 35 books at $.25 each. _____

7. If an airplane travels at the rate of 200 miles an hour, how far can it go in 3 hours? _____

8. Polly's mother needs 72 feet of clothesline. The clothesline is sold by the yard. How many yards of clothesline should she ask for? _____

9. Lucy bought 2 loaves of bread at 12¢ a loaf and a pound of butter at 59¢ a pound. In all she spent _____¢.

10. John has 27 nickels in his bank. 27 nickels = _____ dollar and _____ cents.

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

Review Practice

1. $9 \times 8 =$ ____, so $72 \div 8 =$ ____

2. $7 \times 9 =$ ____, so $63 \div 9 =$ ____

3. $6 \times 9 =$ ____, so $54 \div 9 =$ ____

4. $7 \times 8 =$ ____, so $56 \div 8 =$ ____

5.

1 gal. = ___ qt.	1 min. = ___ sec.
1 hr. = ___ min.	1 ft. = ___ in.
1 yd. = ___ in.	1 lb. = ___ oz.
1 yd. = ___ ft.	1 T. = ___ lb.
1 mi. = ___ ft.	1 yr. = ___ wk.

6.

$24 + 7 =$ ____	$56 + 7 =$ ____
$36 + 9 =$ ____	$35 + 8 =$ ____
$84 + 6 =$ ____	$28 + 6 =$ ____
$79 + 3 =$ ____	$47 + 4 =$ ____

7.

$53 - 49 =$ ____	$42 - 36 =$ ____
$62 - 56 =$ ____	$33 - 28 =$ ____
$70 - 63 =$ ____	$51 - 45 =$ ____
$54 - 48 =$ ____	$71 - 64 =$ ____

8. 1 ft. 6 in. = ___ in. 12 ft. = ___ yd.
2 yd. = ___ ft. 2 gal. = ___ qt.

9. Draw a line around the larger number in each pair.

100,000	99,999	80,808	80,880
90,001	89,999	123,000	132,000

10. At 3 for a dime, how many Christmas cards can you buy for 50¢?
____

11. $47 \div 9 =$ ____ and ____ over

12. $39 \div 6 =$ ____ and ____ over

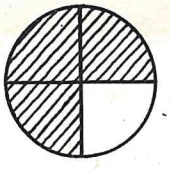
13. $74 \div 8 =$ ____ and ____ over

14. $69 \div 9 =$ ____ and ____ over

15. $57 \div 9 =$ ____ and ____ over

16. $52 \div 9 =$ ____ and ____ over

17. What part of the circle is shaded?
____



18. To find the total cost of 5 books, each costing the same amount, you should _____.

19. If you know how much 1 balloon costs, to find how many balloons you can buy with the money you have, you should _____.

20. At 3 for 5¢, how much will 21 crayons cost? ____

21. If a car travels 30 mi. an hour, in 3 hours it will travel ____ miles.

22. $\frac{1}{8}$ of 64 = ____ $\frac{1}{9}$ of 63 = ____

23. Will 12 toys at 5¢ each cost the same as 5 toys at 12¢ each? ____

24. Take the tests on pages 3, 7, 70, and 71 again today.

Review Practice

1. $\begin{array}{r} \$2.74 \\ .86 \\ .95 \\ 3.84 \\ \hline \end{array}$ $\begin{array}{r} \$5.49 \\ .87 \\ .06 \\ 9.84 \\ \hline \end{array}$ $\begin{array}{r} \$4.98 \\ 8.76 \\ 2.47 \\ .96 \\ \hline \end{array}$

2. $\begin{array}{r} 287 \\ -194 \\ \hline \end{array}$ $\begin{array}{r} 500 \\ -376 \\ \hline \end{array}$ $\begin{array}{r} \$24.78 \\ -\ 17.93 \\ \hline \end{array}$

3. $\begin{array}{r} 275 \\ \times 8 \\ \hline \end{array}$ $\begin{array}{r} 75 \\ \times 87 \\ \hline \end{array}$ $\begin{array}{r} 409 \\ \times 6 \\ \hline \end{array}$

4. $7\overline{)672}$ $8\overline{)643}$ $6\overline{)\$39.00}$

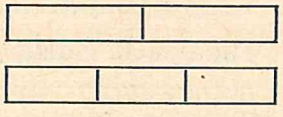
5. $8\overline{)480}$ $9\overline{)\$72.54}$ $7\overline{)\$37.94}$

6. 1 T. = _____ lb. 1 min. = _____ sec.
1 mi. = _____ ft. 1 yr. = _____ wk.
1 yr. = _____ da. 1 da. = _____ hr.

Progress Test V

1. Harry can walk 5 mi. an hour. In 3 hours he can walk _____ mi.

2. Which is more, $\frac{1}{2}$ or $\frac{1}{3}$? _____



3. Write in figures: four hundred thousand, twenty-five. _____

4. At 4 for 5¢, 24 marbles cost _____¢.

5. Might the height of a circus giant be 1 yd., 5 ft., or 8 ft.? _____

6. November has _____ days.

7. When apples are selling at 3 for a dime, you get _____ apples for 30¢.

8. Tommy timed the electric sign at Green's Drug Store. He found it flashed on 16 times a minute. How many times does it flash on in 15 minutes? _____

9. Find the cost of $\frac{1}{2}$ lb. of cheese at 42¢ a pound, and a box of crackers at 15¢. _____

10. A horse weighs 1750 lb. He weighs _____ lb. less than a ton.

8. _____

9. _____

10. _____

Number of answers correct: _____ Date: _____ _____, _____

How Many Years Ago?

1. Write the missing numbers in the table below to show how many years ago each important invention was made.

Invention	Year of Invention	How Many Years Ago?
Lightning rod	1752	
Steamboat	1787	
Sewing machine	1790	
Safety pin	1854	
Motion-picture machine	1861	
Typewriter	1867	
Lawn mower	1868	
Telephone	1876	
Trolley car	1884	
Fountain pen	1884	
Airplane	1903	

2. Write the numbers in the table below to show how many years ago each person was born.

Person	Year Born	How Many Years Ago?
William Penn	1644	
Benjamin Franklin	1706	
George Washington	1732	
Robert Fulton	1765	
Francis Scott Key	1780	
Henry W. Longfellow	1807	
Cyrus H. McCormick	1809	
Stephen Foster	1826	
Thomas A. Edison	1847	
Woodrow Wilson	1856	
Franklin D. Roosevelt	1882	

Work Space

A Page of Practice

Add and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	\$2.78	\$4.78	\$5.68	\$ 7.68	\$14.29	\$24.63
	4.65	9.34	7.73	19.87	28.34	8.75
	8.32	8.76	4.62	8.94	.79	9.38
	9.56	3.51	2.80	23.69	.65	42.68

Subtract and check.

2.	385	786	806	394	\$9.56	\$6.00
	297	293	275	87	4.73	2.75
3.	700	287	7000	9638	\$12.75	\$37.70
	356	279	2470	2747	8.69	26.84

Multiply. Check by going over your work.

4.	379	439	507	769	\$8.90	\$7.98
	8	9	7	6	5	4
5.	78	68	69	48	\$.45	\$.56
	49	68	76	57	58	94

Divide. Check on a separate paper.

6.	9)688	8)609	9)581	6)4200	5)\$1.95	7)\$5.46
7.	8)788	9)803	6)5448	5)4850	4)\$3.44	7)\$6.02

Multiplying by 10, by 100, by 1000

1. To multiply a number by 10, put _____ zero after the number.

$10 \times 18 =$ _____ $10 \times 54 =$ _____ $10 \times 313 =$ _____ $10 \times 732 =$ _____

$10 \times 27 =$ _____ $10 \times 60 =$ _____ $10 \times 546 =$ _____ $10 \times 356 =$ _____

2. To multiply a number by 100, put _____ zeros after the number.

$100 \times 14 =$ _____ $100 \times 435 =$ _____ $100 \times 573 =$ _____

$100 \times 80 =$ _____ $100 \times 206 =$ _____ $100 \times 750 =$ _____

3. To multiply a number by 1000, put _____ zeros after the number.

$1000 \times 82 =$ _____ $1000 \times 352 =$ _____ $1000 \times 387 =$ _____

$1000 \times 40 =$ _____ $1000 \times 476 =$ _____ $1000 \times 230 =$ _____

4. Tell how each of these multiplications is done.

\$ .72 ×30 \$21.60	45 ×400 18,000	\$ .75 ×600 \$450.00

5. Cover the examples above and do the same multiplications below.

\$.72 ×30	45 ×400	\$.75 ×600

Multiply. Check by going over your work.

6. 84 × 30 = _____ 57 × 60 = _____ 17 × 200 = _____

7. 39 × 70 = _____ 64 × 700 = _____ 58 × 4000 = _____

8. \$.86 × 20 = _____ \$.74 × 500 = _____ \$.35 × 7000 = _____

9. \$.79 × 80 = _____ \$.86 × 600 = _____ \$.38 × 6000 = _____

10. An electric sign flashes on 15 times a minute. The sign flashes on _____ times an hour.

11. An airplane travels at the rate of 485 miles an hour. In 10 hours of flying it can go _____ miles.

12. Find the cost of 200 lily bulbs at \$.29 each.

10.	11.	12.

A Page of Easy Problems

1. Ann wants to buy 6 candy eggs selling at 2 for a nickel. She needs _____¢.

2. One ice-cube tray in an electric refrigerator holds 9 rows of cubes with 4 cubes in a row. The tray holds _____ cubes in all.

3. Riding a bicycle at the rate of 8 mi. an hour, Ralph can go _____ mi. in 3 hr.

4. If 6 boys share 48 peanuts, each boy will get _____ peanuts.

5. The total cost of $\frac{1}{2}$ lb. of butter, at 60¢ a pound, and an 8-cent loaf of bread will be _____.

6. Tom can hoe 4 rows of corn in an hour. Tom has to hoe 12 rows. It will take him _____ hours.

7. When plums are selling 7 for a dime, you can get _____ for 20¢.

8. Ann has 50¢. She wants to buy a 59-cent box of paints. She needs _____¢ more.

9. How many 5-cent party favors can Joan buy for 45¢? _____

10. The date two weeks from April 2 is April _____.

11. Lois has written her aunt a letter. If Lois buys a 13-cent special-delivery stamp and a 5-cent air-mail stamp for the letter, she will spend _____¢.

12. Martha had 50 words in a spelling test. She spelled 7 words wrong. She spelled the other _____ words correctly.

13. A rope 8 yards long is _____ feet long.

14. In July there are _____ days. In July there are _____ weeks and _____ days left over.

15. A mule which travels at the rate of 9 miles an hour would take _____ hours to travel 27 miles.

16. In $\frac{1}{2}$ lb. there are _____ oz.

17. Ann is knitting a sweater. She can knit 10 rows in an hour. In 4 hours she can knit _____ rows.

18. John has 3 candy bars. He wants to give a piece of the candy to each of 12 boys. He will have to cut each candy bar into _____ equal pieces.

A Two-Place Number Times a Three-Place Number

1. The principal of Westwood School bought 15 boxes of pencils. There were 144 pencils in each box.

The multiplication at the right shows how to multiply to find how many pencils he bought in all.

```
 144
  15
 720
144
2,160
```

Tell how the multiplication is done.

2. Tell how each of these multiplications is done.

285 ×53 855 1425 15,105	$2.35 ×36 1410 705 $84.60	$6.75 ×23 2025 1350 $155.25

3. Cover the multiplications above and work the same examples below.

285 ×53	$2.35 ×36	$6.75 ×23

Multiply. Check by going over your work.

4. 240 × 26 — 375 × 82 — 956 × 34

5. 506 × 36 — 209 × 74 — 873 × 65

6. 428 × 73 — 507 × 92 — 670 × 74

7. 625 × 83 — 739 × 46 — 385 × 67

8. $2.54 × 32 — $4.05 × 73 — $2.80 × 29

9. $6.75 × 25 — $2.75 × 24 — $3.57 × 19

10. $5.60 × 48 — $7.63 × 28 — $6.04 × 25

Practice in Dividing.

1. $\frac{1}{2}$ of 12 = _____ $\frac{1}{4}$ of 16 = _____ $\frac{1}{8}$ of 64 = _____ $\frac{1}{9}$ of 72 = _____

2. $\frac{1}{8}$ of 72 = _____ $\frac{1}{7}$ of 56 = _____ $\frac{1}{9}$ of 81 = _____ $\frac{1}{6}$ of 36 = _____

3. $\frac{1}{4}$ of 28 = _____ $\frac{1}{8}$ of 56 = _____ $\frac{1}{7}$ of 63 = _____ $\frac{1}{9}$ of 54 = _____

4. $\frac{1}{6}$ of 42 = _____ $\frac{1}{5}$ of 45 = _____ $\frac{1}{6}$ of 24 = _____ $\frac{1}{5}$ of 255 = _____

5. $\frac{1}{2}$ of 48 = _____ $\frac{1}{3}$ of 96 = _____ $\frac{1}{8}$ of 480 = _____ $\frac{1}{8}$ of 408 = _____

6. 42 ÷ 8 = _____ and _____ over 58 ÷ 6 = _____ and _____ over

7. 51 ÷ 7 = _____ and _____ over 67 ÷ 8 = _____ and _____ over

8. 40 ÷ 9 = _____ and _____ over 86 ÷ 9 = _____ and _____ over

9. 31 ÷ 4 = _____ and _____ over 77 ÷ 8 = _____ and _____ over

	a	*b*	*c*	*d*	*e*	*f*
10.	$8\overline{)97}$	$6\overline{)75}$	$8\overline{)134}$	$7\overline{)256}$	$9\overline{)384}$	$7\overline{)532}$
11.	$7\overline{)496}$	$8\overline{)723}$	$9\overline{)813}$	$7\overline{)495}$	$6\overline{)482}$	$5\overline{)451}$
12.	$6\overline{)540}$	$8\overline{)640}$	$7\overline{)420}$	$6\overline{)240}$	$5\overline{)300}$	$8\overline{)560}$
13.	$5\overline{)\$2.55}$	$6\overline{)\$3.60}$	$8\overline{)\$4.88}$	$2\overline{)\$1.68}$	$3\overline{)\$1.89}$	$4\overline{)\$2.00}$

Practice in Dividing

Divide. Check on a separate paper.

	a	*b*	*c*	*d*	*e*
1.	6)$9.90	7)$8.96	8)$17.92	9)$39.15	5)$43.00
2.	5)$25.65	6)$36.54	7)$49.56	8)$64.56	9)$63.72
3.	4)$36.88	9)$74.70	6)$50.40	7)$53.20	8)$75.28

4. Tom needs 108 ft. of rope. The rope is sold by the yard. How many yards shall he buy? _____

5. Allowing 3 ft. in the row for each blackberry bush, how many bushes will Fred need to plant in a row 72 ft. long? _____

6. Six boys bought the materials to build a radio. They spent $6.72 in all. If they share the cost equally, each boy should pay _____.

7. Frank can plant young evergreen trees at the rate of 8 trees an hour. He has 96 trees to plant. To plant 96 trees will take _____ hours of work.

8. When paper clips sell at 6 for 5¢, how many can you get for 65¢? _____

9. For a school party 52 quarts of ice cream are needed. The ice cream will be bought by the gallon. How many gallons should be ordered? _____

4.	5.	6.	7.	8.	9.

1. Use your ruler to measure these lines. Then write the length of each.

Length: $\frac{3}{8}$ in.

Length: _____ in.

Length: _____ in.

Length: _____ in.

Length: _____ in.

Length: _____ in.

2. Draw a line around the larger fraction in each pair. You may use Ex. 1 to help you.

$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{7}{8}$	$\frac{3}{4}$
$\frac{1}{2}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{3}{8}$
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{8}$

3. Use your ruler to measure these lines. Then on each line write its length.

_____ in.

_____ in.

_____ in.

_____ in.

_____ in.

4. Draw a line $1\frac{1}{2}$ in. long.

5. Draw a line $2\frac{3}{4}$ in. long.

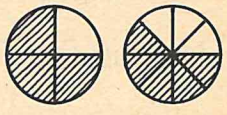
6. Draw a line $3\frac{3}{8}$ in. long.

7. If an inch is divided into 2 equal parts, each part is called ____ of an inch.

8. If an inch is divided into 4 equal parts, each part is called ____ of an inch. Three of these parts make _____ of an inch. Two of these parts make $\frac{2}{4}$ of an inch, or _____ of an inch.

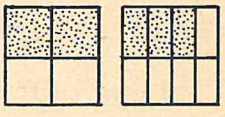
9. If an inch is divided into 8 equal parts, each part is called ____ of an inch. Five of these parts make _____ of an inch. Four of these parts make $\frac{4}{8}$ of an inch, or _____ of an inch.

10. The shaded parts of these equal circles show that $\frac{3}{4}$ is larger than _____.



11. The white parts of the circles show that _____ is smaller than _____.

12. The shaded parts of these equal squares show that $\frac{1}{2}$ is larger than _____.



13. The white parts of the squares show that _____ is larger than _____.

Finding Averages

1. Miss Carter gave her class three spelling tests this month. The work in the box shows that Ted made 100 on the first test, _____ on the second test, and _____ on the third.

Ted's Marks	
1st test	100
2nd test	75
3rd test	92
	267

$$3\overline{)267}\quad 89$$

Average = _____

2. Miss Carter must give Ted a mark in spelling on his report card this month. Would it be fair to give him a mark of 100 for the month? _____

3. Would it be fair to give him 75 for the month? _____

4. What would be a fair mark in spelling for Ted for the month? _____

5. To find a fair mark to give Ted in spelling for the month, Miss Carter found the **average** of Ted's three test marks.

First she found that the sum of the three marks was _____.

Then she divided the 267 by 3 and got 89.

The average of Ted's three spelling test marks is 89. Miss Carter will give Ted 89 in spelling.

6. Ann's marks on four arithmetic tests are shown in this box. Make a guess on what you think would be a fair mark for her report card.

_____

Ann's Marks	
1st test	80
2nd test	76
3rd test	60
4th test	84

$$4\overline{)\quad\quad}$$

Average = _____

7. In the box add Ann's four marks. The sum is _____. Divide the sum of her marks by 4. Your division shows that her *average* mark for the month is _____.

In the boxes below find the average of each of these children's test marks for this month.

8.

Jean's Marks	
1st test	95
2nd test	84
3rd test	82

Average = _____

Jim's Marks	
1st test	78
2nd test	72
3rd test	87

Average = _____

9.

Peter's Marks	
1st test	88
2nd test	92
3rd test	100
4th test	80

Average = _____

Lester's Marks	
1st test	65
2nd test	81
3rd test	76
4th test	70

Average = _____

1. Four boys were gathering hickory nuts. Tom found 20 nuts, Joe found 42, Pete found 50, and Jim found 36. The average number of nuts found by each boy was _____ nuts.

2. The ages of 5 boys in a club are 8 yr., 9 yr., 9 yr., 10 yr., 9 yr. The average age of the boys in the club is _____ yr.

3. Tom went to a lumberyard with his father in a truck. The first hour they traveled 20 miles. The second hour they traveled 30 miles. They traveled an average of _____ miles an hour.

4. The weights of three 9-year-old girls are 60 lb., 72 lb., and 81 lb. The average weight of the girls is _____ lb.

1.	2.	3.	4.

Estimate the average of the numbers in each box. Then find each average.

5.	6.	7.
ESTIMATED AVERAGE _____	ESTIMATED AVERAGE _____	ESTIMATED AVERAGE _____
72 87 54	81 48 69	100 24 52 68
AVERAGE _____	AVERAGE _____	AVERAGE _____
8.	**9.**	**10.**
ESTIMATED AVERAGE _____	ESTIMATED AVERAGE _____	ESTIMATED AVERAGE _____
75 82 73 97 88	6 8 7 12 14 7	10 15 20 25 30
AVERAGE _____	AVERAGE _____	AVERAGE _____

Do You Know Number Magic?

Charles Carlson was on a quiz program on the radio. He was given the question, "How much is 99×25?"

He thought a few seconds, then answered, "2475." People listening to their radios were amazed.

Charles knows some number tricks. If you study this page, you can easily learn Charles's tricks and amaze people, too.

1. When Charles wants to add 30 and 26 in his head, he thinks: 30 and 20 are 50, and 6 more are _____.

2. To add 92 and 53, he thinks: 92 and 50 are 142, and 3 more are _____.

Practice until you can do these quickly. Then write the sums.

3. $35 + 40 =$ _____ $43 + 20 =$ _____
4. $30 + 56 =$ _____ $42 + 21 =$ _____
5. $54 + 32 =$ _____ $64 + 25 =$ _____
6. $17 + 23 =$ _____ $28 + 42 =$ _____
7. $45 + 35 =$ _____ $36 + 25 =$ _____
8. $48 + 24 =$ _____ $67 + 15 =$ _____
9. $56 + 36 =$ _____ $48 + 26 =$ _____
10. $39 + 25 =$ _____ $79 + 18 =$ _____

11. To subtract 14 from 40, Charles thinks: $40 - 10 = 30$; $30 - 4 =$ _____.

12. To subtract 25 from 81, Charles thinks: $81 - 20 = 61$; $61 - 5 =$ _____.

Practice until you can do these quickly. Then write the answers.

13. $65 - 30 =$ _____ $50 - 27 =$ _____
14. $40 - 14 =$ _____ $57 - 23 =$ _____
15. $87 - 25 =$ _____ $69 - 45 =$ _____
16. $58 - 22 =$ _____ $46 - 15 =$ _____
17. $53 - 13 =$ _____ $53 - 14 =$ _____
18. $74 - 27 =$ _____ $65 - 38 =$ _____
19. $82 - 48 =$ _____ $71 - 27 =$ _____
20. $66 - 18 =$ _____ $78 - 39 =$ _____

21. When Charles wants to find 99×25, he thinks: 99×25 is $(100 \times 25) - 25$. $100 \times 25 = 2500$. $2500 - 20 = 2480$; $2480 - 5 =$ _____.

Practice until you can do these quickly. Then write the answers.

22. $99 \times 28 =$ _____ $57 \times 99 =$ _____
23. $99 \times 37 =$ _____ $68 \times 99 =$ _____
24. $99 \times 63 =$ _____ $54 \times 99 =$ _____
25. $99 \times 82 =$ _____ $23 \times 99 =$ _____
26. $99 \times 75 =$ _____ $46 \times 99 =$ _____

The exercises on this page and similar exercises should be practiced orally again and again. Emphasis should be placed on pupils' gains in accuracy and speed of thinking.

Add and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	\$.89	\$.73	\$3.46	\$4.75	\$25.94	\$14.67
	.75	.82	.28	3.86	2.83	.85
	.87	.96	9.00	.94	15.00	.93
	.96	.53	6.00	.07	6.07	12.00
	.63	.47	5.25	3.20	.79	.76
	.28	.82	2.83	4.63	.86	1.15

Subtract and check.

2.	387	276	498	507	\$4.65	\$5.00
	194	128	79	289	2.87	2.78
3.	3000	5000	8000	2965	\$35.62	\$89.76
	1790	2876	1765	1784	33.84	25.98

Multiply. Check by going over your work.

4.	356	207	465	340	\$7.43	\$2.59
	9	8	7	8	6	6
5.	54	28	95	204	\$3.72	\$4.34
	73	86	76	75	66	28

Divide. Check on a separate sheet of paper.

6.	$6\overline{)78}$	$7\overline{)672}$	$8\overline{)720}$	$6\overline{)483}$	$7\overline{)\$5.39}$	$8\overline{)\$56.32}$
7.	$9\overline{)285}$	$6\overline{)472}$	$8\overline{)375}$	$9\overline{)683}$	$7\overline{)\$45.50}$	$9\overline{)\$56.70}$

Problem Test VI

1. The first automobile was invented in 1892. That was _____ years ago.

2. Polly has a box of 300 beads. She wants to make 4 necklaces. She has enough beads to put _____ beads on each of the 4 necklaces.

3. Donna wants to buy a sweater that costs $4.00. She has $2.83. How much more does she need? _____

4. How many pieces of wire each 9 in. long can Bill cut from a piece of wire 2 yd. long? _____

5. Allan made 100 on one arithmetic test last month, 70 on another, and 88 on a third test. Allan's average mark in arithmetic tests last month was _____.

6. Tom bought a bicycle at a sale for $21.98. The regular price of the bicycle was $28.50. Tom saved _____ by buying the bicycle at the sale.

7. Esther wants a shoulder-strap bag costing $2.29, a silk scarf costing $.98, and bunny-fur gloves costing $2.89. All three things will cost _____.

8. A jeep traveling at 28 miles an hour can go _____ miles in 4 hours.

9. Find the cost of a pound (16 oz.) of salted peanuts if a 2-ounce package costs 10¢. _____

10. Jane has 3 muffin tins. Each of two of the tins holds 9 muffins. The other tin holds 12 muffins. She can bake _____ muffins at one time.

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

1. 35 + 6 = _____ 49 + 5 = _____
   47 + 8 = _____ 57 + 6 = _____
   56 + 9 = _____ 38 + 6 = _____
   73 + 7 = _____ 28 + 3 = _____

2. 60 − 56 = _____ 70 − 63 = _____
   53 − 48 = _____ 52 − 45 = _____
   54 − 49 = _____ 31 − 28 = _____

3. 84 ÷ 9 = _____ and _____ over
   70 ÷ 9 = _____ and _____ over
   53 ÷ 8 = _____ and _____ over
   41 ÷ 6 = _____ and _____ over
   47 ÷ 5 = _____ and _____ over
   56 ÷ 6 = _____ and _____ over

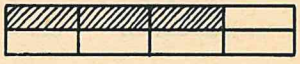
4. 7 × 6 = _____, so 42 ÷ 6 = _____
   5 × 8 = _____, so 40 ÷ 8 = _____
   6 × 9 = _____, so 54 ÷ 9 = _____
   8 × 7 = _____, so 56 ÷ 7 = _____

5. Draw lines between the equal amounts.

1 ft. 5 in.	5280 ft.
1 mile	18 ft.
6 yd.	18 in.
$\frac{1}{4}$ yd.	17 in.
$\frac{1}{2}$ yd.	9 in.

6. 270,400 is read: _____ thousand, _____ hundred.

7. Is a line $1\frac{1}{2}$ in. long longer than a line $1\frac{1}{4}$ in. long? _____

8. What part of this rectangle is shaded? _____ 

9. Two bunches of turnips cost 9¢. Four bunches cost _____¢.

10. Dave bought 9 bananas for 45¢. He paid at the rate of _____¢ apiece for the bananas.

11. The average of 7, 8, and 9 is _____.

12. A plane traveling at the rate of 200 miles an hour can go _____ miles in 3 hours.

13. Twenty 3-cent stamps cost ____¢.

14. There are 10 classrooms in Harrisville School. There are 32 pupils in each room. All together there are _____ pupils in the school.

15. Roy bought 10 cards for 35¢. He sold them at 5¢ apiece. He earned _____¢.

16. Does an elephant which weighs 2,300 lb. weigh more than a ton? ____

17. 1 yd. = ____ in.; 10 yd. = ____ in.

18. Take the tests on pages 3, 7, 70, and 71 again today.

Review Practice

1. $\begin{array}{r} \$4.28 \\ 6.75 \\ 9.83 \\ 2.74 \\ 6.57 \\ \hline \end{array}$ $\begin{array}{r} \$5.90 \\ 2.08 \\ .87 \\ 9.53 \\ 4.78 \\ \hline \end{array}$ $\begin{array}{r} \$6.74 \\ 2.89 \\ 1.70 \\ 5.68 \\ 4.93 \\ \hline \end{array}$

2. $\begin{array}{r} 1765 \\ -\,984 \\ \hline \end{array}$ $\begin{array}{r} 209 \\ -\,189 \\ \hline \end{array}$ $\begin{array}{r} \$40.00 \\ -\,27.64 \\ \hline \end{array}$

3. $\begin{array}{r} 275 \\ \times\,8 \\ \hline \end{array}$ $\begin{array}{r} 27 \\ \times\,83 \\ \hline \end{array}$ $\begin{array}{r} 254 \\ \times\,67 \\ \hline \end{array}$

4. $8\overline{)512}$ $9\overline{)634}$ $8\overline{)\$36.00}$

5. $6\overline{)540}$ $8\overline{)\$64.56}$ $6\overline{)\$39.54}$

6. 1 da. = _____ hr. 1 T = _____ lb.
1 min. = _____ sec. 1 ft. = _____ in.
1 yr. = _____ wk. 1 yd. = _____ in.
1 yr. = _____ da. $\frac{1}{4}$ yd. = _____ in.

Progress Test VI

1. Find the average of 6, 8, 12, 9, and 5. _____

2. $10 \times 59 =$ _____

3. $1000 \times 374 =$ _____

4. $\begin{array}{r} 275 \\ \times\,86 \\ \hline \end{array}$ 5. $\begin{array}{r} 65 \\ \times\,400 \\ \hline \end{array}$

1. _____

6. Use your ruler to measure this line: _____

The line is _____ in. long.

7. Which is larger, $\frac{1}{2}$ or $\frac{5}{8}$? _____

8. Harry needs 12 sheets of paper for one booklet. For 100 booklets he needs _____ sheets of paper.

9. Find the cost of a dozen songbooks at $1.25 each. _____

10. Peter made marks of 96, 84, and 78 on three arithmetic tests. His average mark on the tests was _____.

9. _____

10. _____

Number of answers correct: _____ Date: _____ _____, _____

1. Samuel has just had his height measured. He is 4 ft. 3 in. tall. A year ago he was 47 in. tall. He has grown _____ in. this year.

2. Alice is 3 ft. 10 in. tall. A year ago she was 44 in. tall. She has grown _____ in. this year.

3. Tom is 4 ft. 7 in. tall. Allan is 49 in. tall. Tom is _____ in. taller than Allan.

4. Here is a table showing the height and weight of 5 boys.

Names	Height	Weight
Robert	43	43
William	44	43
Albert	52	71
George	48	56
Charles	53	67

Who is the tallest boy? _____
He is _____ in. tall.

5. Who is the heaviest? _____
He weighs _____ lb.

6. What is the average height of the boys in the table? _____ in.

7. What is the average weight of the boys in the table? _____ lb.

8. 5 ft. 4 in. = _____ in.

9. 3 ft. 7 in. = _____ in.

10. 2 ft. 9 in. = _____ in.

11. 6 ft. 5 in. = _____ in.

12. 4 ft. 8 in. = _____ in.

13. 3 ft. 9 in. = _____ in.

14. 6 ft. 2 in. = _____ in.

15. 5 ft. 11 in. = _____ in.

16. The school nurse said that Lester should weigh at least 70 lb. He weighs 63 lb. He is _____ lb. underweight.

17. Paul weighs 74 lb. He should weigh only 68 lb. Paul is _____ lb. overweight.

Work Space

Addition Practice

Add and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	27	25	75	46	$.74	$.73
	89	34	90	23	.95	.25
	63	68	87	55	.68	.92
2.	75	56	27	75	$3.24	$5.13
	68	84	65	86	.74	2.84
	47	37	48	9	.08	.97
	29	93	94	28	4.07	.60
3.	58	28	427	324	$5.46	$7.84
	63	47	83	47	.83	.27
	29	39	95	986	.24	9.63
	47	86	408	48	.95	.07
	86	23	30	201	4.62	.90
4.	47	33	25	403	$5.43	$3.56
	83	86	73	28	.74	2.01
	29	24	49	35	.87	.94
	63	57	87	300	.09	.37
	24	94	65	74	2.70	4.00
	55	86	90	92	.49	3.98
5.	$42.75	$ 4.75	$ 4.85	$ 1.56	$ .75	$ 4.67
	36.82	10.83	2.76	27.00	26.25	2.83
	27.54	2.64	15.24	36.00	9.34	25.00
	8.73	21.74	25.98	9.07	8.56	36.75
	15.98	9.33	8.76	3.49	17.48	2.48

Subtraction Practice

Subtract and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	283 150	498 275	473 114	565 48	$5.80 1.29	$6.71 .44
2.	621 384	734 589	712 98	835 279	$6.24 5.94	$8.35 .95
3.	900 247	800 56	700 238	600 46	$5.00 1.98	$4.00 3.79
4.	507 289	940 356	478 205	568 490	$5.03 .98	$2.20 1.94
5.	1275 836	1547 982	2546 1384	4798 2346	$38.75 24.69	$28.34 9.75
6.	5000 2467	6000 1784	8000 756	7000 6470	$20.00 2.99	$30.00 27.60
7.	4070 2894	5085 4906	2074 890	3072 2980	$50.75 49.87	$60.35 9.84
8.	5432 2786	7683 6994	5680 987	3765 2983	$47.29 8.63	$35.74 17.75

Dividing Money by Money

1. Joe wants to buy a dollar's worth of flashlight bulbs. The bulbs cost 8¢ each.

To find how many bulbs Joe will get for a dollar, think: One bulb costs _____¢. $1.00 = 100¢. Joe will get as many 8-cent bulbs for $1.00 as there are 8's in 100.

The division in the box shows that Joe can get _____ 8-cent bulbs for $1.00 and he will have _____¢ left over.

```
  12 r4
8)100
   8
   20
   16
    4
```

2. $1.25 = _____¢ $5.67 = _____¢
   $2.47 = _____¢ $4.03 = _____¢
   $3.50 = _____¢ $3.20 = _____¢

3. 460¢ = ___ dollars and ___ cents.

4. 235¢ = ___ dollars and ___ cents.

5. How many 5-cent pencils can Ann get for $1.25? _____

6. How many 3-cent stamps can Pete get for a dollar? _____

7. How many 5-cent air-mail stamps can Mary get for 2 dollars? _____

8. How many 6-cent candy bars can you get for $1.50? _____

Write the missing numbers in this table.

	Price of Article	Amount Spent	Number Bought
9.	2¢	$1.14	
10.	3¢	$1.50	
11.	4¢	$2.00	
12.	5¢	$1.65	
13.	6¢	$2.40	
14.	6¢	$3.00	
15.	6¢	$1.44	
16.	7¢	$2.45	
17.	7¢		16
18.	7¢		24
19.	8¢	$1.20	
20.	8¢		32
21.	9¢	$3.15	
22.	9¢		56

Work Space

Practice in Dividing

Write only the answers in Exs. 1–5. Do all the figuring "in your head."

1. $\frac{1}{8}$ of 64 = _____ $\frac{1}{7}$ of 49 = _____ $\frac{1}{6}$ of 54 = _____ $\frac{1}{9}$ of 63 = _____

2. $\frac{1}{4}$ of 36 = _____ $\frac{1}{8}$ of 72 = _____ $\frac{1}{9}$ of 81 = _____ $\frac{1}{7}$ of 56 = _____

3. $3\overline{)96}$ $4\overline{)484}$ $3\overline{)129}$ $5\overline{)250}$ $6\overline{)360}$ $4\overline{)808}$

4. $4\overline{)328}$ $6\overline{)420}$ $7\overline{)280}$ $3\overline{)279}$ $4\overline{)288}$ $5\overline{)400}$

5. $2\overline{)188}$ $3\overline{)243}$ $5\overline{)3505}$ $7\overline{)420}$ $6\overline{)180}$ $4\overline{)204}$

Divide. Check on a separate sheet of paper.

6. $6\overline{)84}$ $7\overline{)294}$ $8\overline{)360}$ $9\overline{)306}$ $5\overline{)\$4.70}$ $6\overline{)\$5.70}$

7. $9\overline{)405}$ $7\overline{)226}$ $8\overline{)259}$ $7\overline{)379}$ $9\overline{)\$7.56}$ $6\overline{)\$5.34}$

8. $5\overline{)453}$ $8\overline{)536}$ $8\overline{)712}$ $9\overline{)603}$ $5\overline{)\$35.75}$ $7\overline{)\$30.10}$

9. $7\overline{)5355}$ $6\overline{)3654}$ $5\overline{)985}$ $9\overline{)801}$ $6\overline{)\$50.40}$ $9\overline{)\$73.98}$

Using Your Head

1. At 3¢ each, how much will 20 plums cost? _____

2. At 5¢ each, how many apples can you buy for 45¢? _____

3. Ann spent 3 weeks and 2 days at her grandmother's. How many days was she there? _____

4. Joe had a dollar. After buying a 75-cent knife he had a _____ left.

5. George worked $\frac{1}{2}$ hr. before school today and 1 hr. after school. At 20¢ an hour, he earned _____¢ today.

6. How many cents are there in 2 quarters, a dime, and a nickel? _____

7. At 3 bags for a dime, you can get _____ bags of peanuts for 20¢.

8. If a car travels 40 mi. an hour, in 2 hr. it can go _____ mi.

9. Find the cost of $\frac{1}{2}$ lb. of meat at 40¢ a lb. _____

10. Dan can keep a book out of the library 2 weeks. He took out a book on May 10. He must return it on May _____.

11. If you allow 4 cookies for each child at a party, for 20 children you need _____ cookies.

12. Mary uses $\frac{1}{2}$ lemon for a glass of lemonade. She wants to make 6 glasses of lemonade. She needs _____ half lemons. Six half lemons = _____ whole lemons.

13. Peter's school begins at 8 : 30 A. M. He arrived at school at 8 : 42. He was _____ min. late.

14. If you draw a line 1 inch long and then erase $\frac{1}{4}$ in. of the line, how long a line will be left? _____

15. Alice's mother sent her to the store for $\frac{1}{2}$ lb. of butter. The clerk gave her two $\frac{1}{4}$-pound sticks of butter. Did Alice get $\frac{1}{2}$ lb. of butter? _____

16. The average of 9, 10, and 11 is _____.

17. Three gallons = _____ quarts.

18. My watch says it is 4 : 15, but my watch is 10 minutes fast; so the right time is _____ minutes after _____.

19. A 5-cent ball, a 6-cent top, and a 10-cent bat will cost _____¢ all together.

20. Ten 15-cent comic books will cost _____.

1. At 3 for 29¢, a dozen melons cost _____.

2. Each of the 29 children in a class is giving a nickel to help buy an air-age map for the class. All together they are giving _____.

3. Allan wants to buy half a dozen cans of dog food. The food sells for 13¢ a can. Allan has half a dollar. He needs _____¢ more.

4. The mail train passes Tom's house each morning at 7 : 35. This morning the train passed at quarter of eight. It was _____ minutes late.

5. Giraffes travel as fast as 32 miles an hour. At that rate a giraffe could go _____ miles in $\frac{1}{2}$ hour.

6. Ann had a strap 2 yards long. She divided it into 3 equal parts for a dog harness. Each part was _____ in. long.

7. Ann had 6 pictures taken for $4.50. The pictures cost _____ apiece.

8. George wants to buy a pound of salted peanuts. The peanuts come in bags with 4 oz. of peanuts to the bag. The bags cost 15¢ each. George should buy _____ bags. He should spend _____¢.

9. Lester was 9 years old on Jan. 4, 1947. He was born _____ _____, _____.

10. The 32 children in a class plan to serve cookies at a party. They think they should have 3 cookies for each child. The cookies come 8 to a package. How many packages should they buy? _____

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

Longer Multiplications

1. Tell how each of these multiplications is done.

a	*b*	*c*	*d*	*e*
174	275		$4.85	$4.63
246	832	351	164	256
1044	550	350	1940	2778
696	825	17550	2910	2315
348	2200	1053	485	926
42,804	228,800	122,850	$795.40	$1,185.28

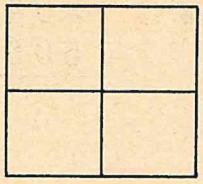
2. Now cover the worked multiplications in Ex. 1 and do the same examples below.

174	275	351	$4.85	$4.63
246	832	350	164	256

Multiply. Check by going over your work.

3.	876	564	548	$3.18	$7.68
	367	459	740	176	385
4.	892	719	728	$6.54	$9.13
	864	396	830	951	537
5.	825	586	829	$3.75	$4.83
	619	741	950	381	926

1. Color $\frac{1}{4}$ of this square red. Color $\frac{1}{4}$ green.



2. Now you have colored _____ fourths of the square.

3. 1 fourth + 1 fourth = _____ fourths.

4. $\frac{1}{4} + \frac{1}{4} = \frac{\quad}{4}$

5. Color $\frac{1}{4}$ of the square above blue.

$$\begin{array}{r} \frac{1}{4} \\ +\ \frac{1}{4} \\ \hline \frac{2}{4} \end{array}$$

6. Now you have colored _____ fourths of the square.

7. 1 fourth + 1 fourth + 1 fourth = _____ fourths.

8. $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{\quad}{4}$

9. $\frac{2}{4} + \frac{1}{4} = \frac{\quad}{4}$

10. $\frac{1}{2} + \frac{1}{4} = \frac{\quad}{4}$

11. $\frac{1}{4} + \frac{2}{4} = \frac{\quad}{4}$

12. Color $\frac{1}{4}$ of the square at the top of the page brown.

$$\begin{array}{r} \frac{1}{4} \\ \frac{1}{4} \\ +\ \frac{1}{4} \\ \hline \frac{3}{4} \end{array}$$

13. Now you have colored _____ fourths of the square.

14. $\frac{3}{4} + \frac{1}{4} = \frac{\quad}{4}$

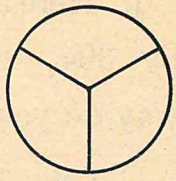
15. $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{\quad}{4}$

16. $\frac{2}{4} + \frac{2}{4} = \frac{\quad}{4}$

$$\begin{array}{r} \frac{2}{4} \\ +\ \frac{1}{4} \\ \hline \frac{3}{4} \end{array}$$

$$\begin{array}{r} \frac{3}{4} \\ +\ \frac{1}{4} \\ \hline \frac{4}{4} \end{array}$$

17. Color $\frac{1}{3}$ of this circle red. Color $\frac{2}{3}$ of the circle green.



18. Now _____ thirds of the circle are colored.

19. 1 third + 2 thirds = _____ thirds.

Write Yes or No after each question.

20. Do $\frac{3}{3}$ of a cooky equal the whole cooky? _____

21. Does 1 half + 1 half = 2 halves? _____

22. Does $\frac{1}{3}$ of a cooky equal $\frac{1}{2}$ of the cooky? _____

23. Do $\frac{3}{3}$ of a cooky equal $\frac{2}{2}$ of the cooky? _____

24. Do 4 half oranges equal 2 whole oranges? _____

25. Do 5 half oranges equal $2\frac{1}{2}$ oranges? _____

26. Do 4 fourths of a yard equal a whole yard? _____

27. Are 5 quarter cakes less than a whole cake? _____

Multiplying by Zero

1. Here are two ways to multiply 234 by 304. Explain each way. Which way do you like better? _____

LONG WAY	SHORT WAY
234	234
304	304
936	936
000	7020
702	71,136
71,136	

2. Tell how each of these multiplications is done.

162	247
405	608
810	1976
6480	14820
65,610	150,176

3. Now cover Ex. 2 and work the same examples below.

162	247
405	608

Multiply. Check by going over your work.

4.	356	475
	407	209
5.	356	738
	506	406
6.	289	812
	605	308
7.	376	246
	307	509
8.	483	574
	406	309
9.	207	459
	607	509

Tell how each of these divisions is done.

	a	*b*	*c*	*d*	*e*	*f*
1.	200 $4\overline{)800}$	300r2 $3\overline{)902}$	300r1 $2\overline{)601}$	700r3 $5\overline{)3503}$	500r4 $6\overline{)3004}$	408 $9\overline{)3672}$

Write only the answers to these divisions. Do all the figuring in your head.

2.	$6\overline{)3603}$	$7\overline{)3504}$	$9\overline{)5406}$	$8\overline{)7208}$	$6\overline{)\$24.06}$	$5\overline{)\$20.10}$
3.	$8\overline{)809}$	$6\overline{)4205}$	$9\overline{)6300}$	$8\overline{)5656}$	$5\overline{)\$40.45}$	$7\overline{)\$21.03}$
4.	$7\overline{)4205}$	$9\overline{)7281}$	$6\overline{)4800}$	$7\overline{)4949}$	$8\overline{)\$64.00}$	$9\overline{)\$18.27}$
5.	$8\overline{)4802}$	$7\overline{)4903}$	$9\overline{)8102}$	$6\overline{)5401}$	$5\overline{)\$25.05}$	$6\overline{)\$18.24}$
6.	$9\overline{)4536}$	$8\overline{)4000}$	$7\overline{)5602}$	$6\overline{)4842}$	$8\overline{)\$32.32}$	$5\overline{)\$35.50}$
7.	$7\overline{)2801}$	$6\overline{)1818}$	$9\overline{)3600}$	$7\overline{)6300}$	$5\overline{)\$30.20}$	$8\overline{)\$24.80}$
8.	$5\overline{)4004}$	$6\overline{)5409}$	$7\overline{)1402}$	$8\overline{)1609}$	$9\overline{)\$27.09}$	$7\overline{)\$28.07}$
9.	$8\overline{)6448}$	$9\overline{)1809}$	$5\overline{)4505}$	$9\overline{)6372}$	$6\overline{)\$42.00}$	$7\overline{)\$49.42}$
10.	$7\overline{)5663}$	$8\overline{)4824}$	$5\overline{)5050}$	$9\overline{)905}$	$4\overline{)\$24.42}$	$6\overline{)\$30.30}$
11.	$6\overline{)3003}$	$8\overline{)3208}$	$9\overline{)3608}$	$7\overline{)2814}$	$7\overline{)\$63.70}$	$8\overline{)\$56.80}$

Getting Change

Write the missing numbers. Give the smallest possible number of coins. In Ex. 1 the change is 3 pennies and 1 nickel, rather than 8 pennies.

	Amount Spent	Amount Given Clerk	Coins Received in Change						
			Pennies	Nickels	Dimes	Quarters	Half Dollars	Dollar Bills	5-Dollar Bills
1.	2¢	10¢	3	1					
2.	4¢	10¢							
3.	21¢	25¢							
4.	17¢	25¢							
5.	8¢	25¢							
6.	42¢	50¢							
7.	36¢	50¢							
8.	20¢	50¢							
9.	13¢	50¢							
10.	52¢	60¢							
11.	58¢	75¢							
12.	66¢	75¢							
13.	91¢	$1.00							
14.	70¢	$1.00							
15.	38¢	$1.00							
16.	23¢	$1.00							
17.	$1.72	$2.00							
18.	$.94	$2.00							
19.	$.32	$2.00							
20.	$4.17	$5.00							
21.	$3.43	$5.00							
22.	$.86	$5.00							
23.	$3.40	$10.00							

Problem Test VII

1. When colored Christmas-tree lights sell at 2 for a nickel, how many lights can you get for 50¢? _____

2. Bill sold 15 papers on Monday, 25 on Tuesday, and 32 on Wednesday. He sold an average of _____ papers a day.

3. How many 6-cent bus tickets can Roger get for $1.50? _____

4. Marie has 60¢. If she buys a dozen apples at 4¢ each, how much money will she have left? _____

5. Find the cost of 26 toys at $.25 each. _____

6. Fred can ride 9 miles an hour on his bicycle. How long will it take him to go from Stockton to Lakeville, a distance of 27 mi.? _____

7. If Health Books cost $1.05, how much will it cost to buy one for each of the 23 pupils in Miss Baldwin's class? _____

8. Out of $2.45 worth of material, Jane made 7 baskets. Each basket cost _____.

9. John can wash 5 windows in an hour. How long will it take him to wash 20 windows? _____

10. John is paid 8¢ for washing a window. How much will he earn by washing 20 windows? _____

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

Review Practice

1. $56 + 20 =$ ____ $175 + 200 =$ ____
   $75 + 30 =$ ____ $346 + 400 =$ ____
   $82 + 70 =$ ____ $524 + 300 =$ ____
   $39 + 60 =$ ____ $304 + 600 =$ ____

2. $36 + 7 =$ ____ $72 + 7 =$ ____
   $45 + 6 =$ ____ $56 + 6 =$ ____
   $54 + 5 =$ ____ $48 + 7 =$ ____
   $63 + 8 =$ ____ $49 + 5 =$ ____

3. $70 - 64 =$ ____ $52 - 49 =$ ____
   $53 - 48 =$ ____ $71 - 63 =$ ____
   $34 - 28 =$ ____ $63 - 56 =$ ____
   $43 - 36 =$ ____ $23 - 18 =$ ____

4. $7 \times 40 =$ ____ $8 \times 90 =$ ____
   $6 \times 60 =$ ____ $6 \times 70 =$ ____
   $7 \times 80 =$ ____ $8 \times 80 =$ ____
   $9 \times 70 =$ ____ $9 \times 60 =$ ____

5. $53 \div 8 =$ ____ and ____ over
   $70 \div 9 =$ ____ and ____ over
   $25 \div 9 =$ ____ and ____ over
   $55 \div 7 =$ ____ and ____ over

6. $75 \div 8 =$ ____ and ____ over
   $68 \div 8 =$ ____ and ____ over
   $53 \div 6 =$ ____ and ____ over
   $41 \div 9 =$ ____ and ____ over

7. $\frac{1}{8}$ of $72 =$ ____ $\frac{1}{9}$ of $54 =$ ____
   $\frac{1}{7}$ of $49 =$ ____ $\frac{1}{6}$ of $48 =$ ____

8. Write these numbers in figures.
   Five hundred thousand ____
   Six thousand, seventy ____
   Forty thousand, six ____

9. $\frac{1}{2}$ yr. = ____ mo. $\frac{1}{4}$ hr. = ____ min.
   $\frac{1}{4}$ yd. = ____ in. $\frac{1}{4}$ gal. = ____ qt.
   $\frac{1}{3}$ yd. = ____ ft. $\frac{1}{2}$ yd. = ____ in.

10. 1 T. = ____ lb. 1 da. = ____ hr.
    1 mi. = ____ ft. 1 lb. = ____ oz.
    1 yr. = ____ da. 1 wk. = ____ da.

11. What will be the date one week from today? ____ ____, ____

12. Is $\frac{3}{8}$ in. longer than $\frac{3}{4}$ in.? ____

13. If you know how much the materials for 5 model planes cost, how can you find the cost of each plane? ____

14. If you know the cost of one tin horn, how can you find the cost of 8 of the horns? ____

15. 246¢ = ____ dollars and ____¢

16. \$7.61 = ____¢ \$8.05 = ____¢

17. $75 \times 5 = 5 \times$ ____

18. Take the tests on pages 3, 7, 70, and 71 again today.

Review Practice

1. $\$2.75 + .46 + 8.04 + .90 + .35$ ____ $76 + 82 + 35 + 49 + 52$ ____ $\$4.62 + 13.84 + 9.73 + 25.67 + 8.24$ ____

2. $784 - 695$ ____ $500 - 197$ ____ $\$27.86 - 19.78$ ____

3. $10 \times 75 =$ ____ $100 \times 69 =$ ____

4. 254×7 ____ 56×60 ____ 905×9 ____

5. 74×35 ____ 276×29 ____ 543×208 ____

6. $9\overline{)390}$ ____ $6\overline{)4854}$ ____ $8\overline{)\$59.60}$ ____

Progress Test VII

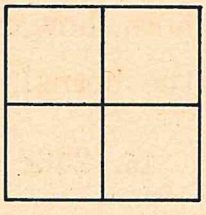
1. 143×256 ____

2. 275×460 ____

3. 128×405 ____

4. $4\overline{)2401}$ ____

5. Color $\frac{1}{4}$ of this square red. Color $\frac{1}{4}$ green. Color $\frac{1}{4}$ blue. Now _____ fourths of the square are colored. $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{\quad}{4}$



6. $\$3.25 =$ _____ cents.

7. How many paper horns at 5¢ each can you buy for 80¢? _____ 7. _____

8. Find the cost of 128 history books at $1.15 each. _____ 8. _____

9. A set of 3 drawing books cost $3.06. Each book cost _____. 9. _____

10. Dan bought a 39-cent white sailor hat. He gave the clerk a half dollar. In change he got 1 cent and 1 _____.

Number of answers correct: _____ Date: _____ _____, _____

A Page of Problems

1. When the Taylor family started on an automobile trip, the speedometer read 2875 miles. When the trip was over, the speedometer read 3038 miles. How many miles had they traveled? _____

2. The Taylors started on their trip at 7:30 A.M. They ended it at 12 o'clock noon. Jean said they traveled $4\frac{1}{2}$ hr. Don said they traveled $5\frac{1}{2}$ hr. Who was right? _____

3. Mr. Taylor bought 10 gallons of gasoline for the trip. At 22¢ a gallon, the gasoline cost _____.

4. Mr. Taylor also bought 6 quarts of oil at $.35 a quart. The oil cost _____.

5. The gasoline and oil together cost _____.

6. Mr. Taylor puts 6 quarts of oil in his car for every thousand miles he drives. If he drives from New York to California, a distance of 3 thousand miles, he will use _____ qt. of oil on the trip.

7. At $.35 a quart, how much would oil for the California trip cost Mr. Taylor? _____

8. Mr. Taylor figures he would use about 150 gallons of gasoline in driving to California. At 22¢ a gallon, how much would 150 gal. cost? _____

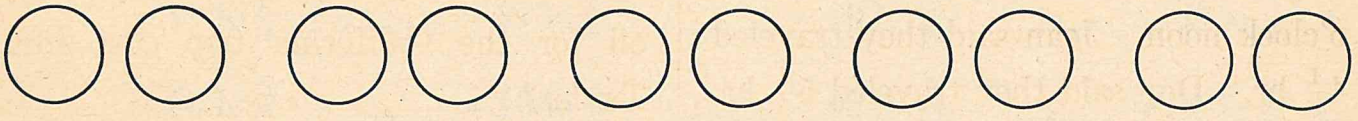
9. If a car travels about 20 miles on 1 gallon of gasoline, how far will it travel on 150 gallons? _____

WORK SPACE

1. Ann bought $\frac{3}{4}$ yd. of gingham at 36¢ a yard. Ann thought: A yard costs 36¢. $\frac{1}{4}$ yd. will cost $\frac{1}{4}$ of 36¢, or _____¢; so $\frac{3}{4}$ yd. will cost 3×9¢, or _____¢.

2. To find the cost of $\frac{3}{8}$ lb. of meat at 48¢ a pound, think: $\frac{1}{8}$ pound costs $\frac{1}{8}$ of 48¢, or _____¢; so $\frac{3}{8}$ pound costs 3×6¢, or _____¢.

3. In the row below there are _____ circles. The circles are divided into _____ equal groups. In each group there is one fifth of the 10 circles. One fifth of 10 circles is _____ circles.



4. Color $\frac{1}{5}$ of the circles above red. Color $\frac{3}{5}$ of the circles green. Now _____ fifth of the 10 circles are not colored.

5. $\frac{1}{8}$ of 24 = _____; so $\frac{3}{8}$ of 24 = $3 \times$ 3, or _____; $\frac{5}{8}$ of 24 = $5 \times$ _____, or _____.

6. $\frac{1}{6}$ of 12 = _____; so $\frac{3}{6}$ of 12 = $3 \times$ _____, or _____; $\frac{5}{6}$ of 12 = $5 \times$ _____, or _____.

7. $\frac{1}{5}$ of 20 = _____; so $\frac{3}{5}$ of 20 = $3 \times$ _____, or _____; $\frac{4}{5}$ of 20 = $4 \times$ _____, or _____.

8. $\frac{1}{6}$ of 48 = _____ $\frac{3}{6}$ of 48 = _____ $\frac{4}{6}$ of 48 = _____ $\frac{5}{6}$ of 48 = _____

9. $\frac{1}{5}$ of 25 = _____ $\frac{2}{5}$ of 25 = _____ $\frac{3}{5}$ of 25 = _____ $\frac{4}{5}$ of 25 = _____

10. $\frac{1}{7}$ of 21 = _____ $\frac{2}{7}$ of 21 = _____ $\frac{4}{7}$ of 21 = _____ $\frac{5}{7}$ of 21 = _____

11. $\frac{1}{8}$ of 40 = _____ $\frac{2}{8}$ of 40 = _____ $\frac{3}{8}$ of 40 = _____ $\frac{7}{8}$ of 40 = _____

12. $\frac{1}{6}$ of 36 = _____ $\frac{2}{6}$ of 36 = _____ $\frac{4}{6}$ of 36 = _____ $\frac{5}{6}$ of 36 = _____

13. $\frac{1}{5}$ of 35 = _____ $\frac{2}{5}$ of 35 = _____ $\frac{3}{5}$ of 35 = _____ $\frac{4}{5}$ of 35 = _____

14. $\frac{1}{8}$ of 32 = _____ $\frac{3}{8}$ of 32 = _____ $\frac{5}{8}$ of 32 = _____ $\frac{7}{8}$ of 32 = _____

15. $\frac{1}{9}$ of 54 = _____ $\frac{2}{9}$ of 54 = _____ $\frac{5}{9}$ of 54 = _____ $\frac{7}{9}$ of 54 = _____

16. $\frac{1}{7}$ of 49 = _____ $\frac{3}{7}$ of 49 = _____ $\frac{4}{7}$ of 49 = _____ $\frac{5}{7}$ of 49 = _____

Finding Fractional Parts of Numbers

1.	$\frac{2}{3}$ of 12 = _____	$\frac{5}{6}$ of 36 = _____	$\frac{4}{7}$ of 21 = _____	$\frac{4}{5}$ of 20 = _____
2.	$\frac{5}{8}$ of 40 = _____	$\frac{5}{9}$ of 63 = _____	$\frac{3}{7}$ of 28 = _____	$\frac{5}{6}$ of 24 = _____
3.	$\frac{7}{9}$ of 54 = _____	$\frac{3}{5}$ of 35 = _____	$\frac{2}{5}$ of 25 = _____	$\frac{7}{8}$ of 56 = _____
4.	$\frac{3}{8}$ of 40 = _____	$\frac{5}{7}$ of 28 = _____	$\frac{5}{8}$ of 72 = _____	$\frac{5}{6}$ of 48 = _____
5.	$\frac{5}{8}$ of 64 = _____	$\frac{2}{5}$ of 40 = _____	$\frac{3}{7}$ of 49 = _____	$\frac{4}{5}$ of 35 = _____
6.	$\frac{7}{9}$ of 63 = _____	$\frac{7}{10}$ of 60 = _____	$\frac{5}{9}$ of 72 = _____	$\frac{3}{4}$ of 40 = _____
7.	$\frac{3}{5}$ of 45 = _____	$\frac{3}{10}$ of 80 = _____	$\frac{3}{8}$ of 64 = _____	$\frac{2}{7}$ of 63 = _____
8.	$\frac{5}{9}$ of 45 = _____	$\frac{6}{7}$ of 49 = _____	$\frac{5}{6}$ of 30 = _____	$\frac{3}{8}$ of 56 = _____
9.	$\frac{3}{7}$ of 42 = _____	$\frac{2}{9}$ of 63 = _____	$\frac{5}{8}$ of 32 = _____	$\frac{5}{6}$ of 54 = _____

10. $\frac{1}{4}$ yd. = ____ in. $\frac{3}{4}$ yd. = ____ in.

11. $\frac{1}{4}$ hr. = ____ min. $\frac{3}{4}$ hr. = ____ min.

12. $\frac{1}{4}$ lb. = ____ oz. $\frac{3}{4}$ lb. = ____ oz.

13. $\frac{1}{8}$ lb. = ____ oz. $\frac{3}{8}$ lb. = ____ oz.
$\frac{5}{8}$ lb. = ____ oz. $\frac{7}{8}$ lb. = ____ oz.

14. $\frac{1}{4}$ dollar = ____¢ $\frac{3}{4}$ dollar = ____¢

15. $\frac{1}{3}$ doz. = _____ things
$\frac{2}{3}$ doz. = _____ things

16. Joan earns 50¢ a week. She puts $\frac{2}{5}$ of her money in her piggy bank each week. She puts _____¢ in her bank each week.

17. Three eighths of a yard of ribbon at 24¢ a yard will cost _____¢.

18. At the Self Help store John bought a bunch of grapes. The bunch weighed $\frac{3}{4}$ lb. At 16¢ a pound, John's bunch of grapes cost _____¢.

19. Find the cost of $\frac{7}{8}$ yard of rayon at 72¢ a yard. _____¢

20. $\frac{1}{10}$ dollar = ____¢ $\frac{2}{10}$ dollar = ____¢
$\frac{3}{10}$ dollar = ____¢ $\frac{4}{10}$ dollar = ____¢

21. $\frac{1}{3}$ mile = _____ ft.
$\frac{2}{3}$ mile = _____ ft.

21.

Multiplying by Mixed Numbers

1. Jane bought $2\frac{1}{2}$ yards of ribbon at 20¢ a yard. For the 2 yd. Jane paid $2 \times 20¢$, or _____¢. For the $\frac{1}{2}$ yd. Jane paid $\frac{1}{2}$ of 20¢, or _____¢. For the $2\frac{1}{2}$ yd. Jane paid 40¢ + 10¢, or _____¢.

$2 \times 20¢ = 40¢$
$\frac{1}{2}$ of $20¢ = 10¢$
$50¢$

2. To find the cost of $2\frac{3}{4}$ lb. of lard at 32¢ a lb., think: 2 lb. will cost $2 \times 32¢$, or _____¢; $\frac{3}{4}$ lb. will cost $\frac{3}{4}$ of 32¢, or _____¢; so $2\frac{3}{4}$ lb. will cost 64¢ + 24¢, or _____¢.

3. $2\frac{2}{3}$ yd. lace at 30¢ a yd. will cost _____.

4. $3\frac{5}{8}$ yd. rope at 16¢ a yd. will cost _____.

5. $2\frac{5}{8}$ lb. candy at 40¢ a lb. will cost _____.

6. $6\frac{1}{2}$ ft. wire at 10¢ a ft. will cost _____.

7. $4\frac{1}{2}$ yd. rayon at $1.00 a yd. will cost _____.

8. $3\frac{3}{8}$ lb. cheese at 48¢ a lb. will cost _____.

9. $3\frac{1}{4}$ yd. ribbon at 20¢ a yd. will cost _____.

10. $2\frac{3}{4}$ lb. cookies at 48¢ a lb. will cost _____.

11. $3\frac{1}{2}$ yd. canvas at $2.00 a yd. will cost _____.

12. $2\frac{1}{4}$ oz. seed at 40¢ an oz. will cost _____.

13. $2\frac{3}{4}$ pounds = _____ ounces

14. $3\frac{5}{6}$ yards = _____ inches

WORK SPACE

Checking Grocery Bills

Check these grocery bills carefully. See if you can find any errors. When you find an error, correct it and find the right amount of the bill.

1 box soap powder	$.24	3 boxes frozen peas at 29¢	$.81	$3\frac{1}{2}$ lb. cabbage at 8¢	$.28
3 cans soup at 16¢	.48	2 jars plum jam at 26¢	.52	6 grapefruit at 3 for 17¢	.34
$\frac{1}{2}$ lb. cookies at 48¢	.24	6 bars soap at 3 for 23¢	.46	1 lb. spinach at 2 lb. for 19¢	.10
	$.96		$1.89		$.72

$\frac{3}{4}$ lb. grapes at 16¢	$.12	2 boxes raisins at 14¢	$.28	3 boxes cereal at 16¢	$.48
1 jar peanut butter	.29	1 bottle vinegar	.18	5 lb. apples at 8¢	.40
2 boxes prunes at 28¢	.46	$1\frac{7}{8}$ lb. melon at 8¢	.16	3 pkg. spaghetti at 12¢	.36
	$.87		$.62		$1.24

4 cans peas at 17¢	$.68	1 can cleanser at 2 for 17¢	$.09	6 rolls at 24¢ a doz.	$.12
3 pkg. rolls at 13¢	.19	3 boxes frozen beans at 27¢	.81	$3\frac{1}{2}$ lb. meat at 42¢	1.47
$2\frac{1}{4}$ lb. greens at 12¢	.27	$\frac{7}{8}$ lb. cheese at 40¢	.35	1 bunch carrots at 2 for 15¢	.08
	$1.14		$1.15		$1.67

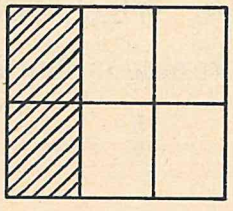
1 jar peanut butter	$.29	2 glasses jelly at 17¢	$.34	1 pkg. cottage cheese	$.13
6 candy bars at 3 for 10¢	.20	$2\frac{3}{4}$ lb. meat at 44¢	1.11	2 pkg. crackers at 9¢	.18
$2\frac{3}{8}$ lb. bananas at 16¢	.38	1 bunch turnips at 2 for 19¢	.09	$3\frac{5}{8}$ lb. fruit at 8¢	.29
	$.87		$1.54		$.60

3 cans fruit juice at 6 for 59¢	$.30	4 lb. plums at 2 lb. for 25¢	$.50	1 can milk at 3 for 29¢	$.10
$2\frac{3}{8}$ lb. fish at 32¢	.72	4 cans soup at 2 for 23¢	.46	1 jar chocolate drink	.39
1 jar apple butter	.29	$\frac{3}{4}$ lb. meat at 48¢	.36	10 lb. potatoes at 5 lb. for 29¢	.58
	$1.31		$1.42		$1.07

1. Peggy wants to serve half a cantaloupe to each of the 6 persons in her family. She needs _____ halves, or _____ whole cantaloupes.

2. Bobby practices on his flute an hour a day. He practiced $\frac{1}{2}$ hr. this morning and $\frac{1}{4}$ hr. after school. He must practice _____ hr. this evening.

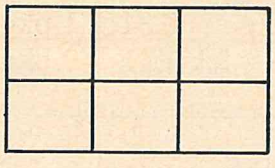
3. Two sixths of this rectangle are shaded and _____ sixths are white.



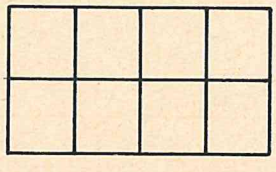
4. Does the drawing in Ex. 3 show that $\frac{2}{6}$ of the rectangle are the same as $\frac{1}{3}$ of it? _____

5. Does the drawing in Ex. 3 show that $\frac{4}{6}$ of the rectangle are the same as $\frac{2}{3}$ of it? _____

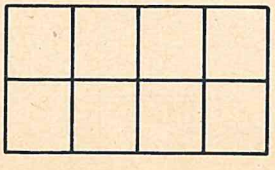
6. Color this rectangle to show that $\frac{3}{6}$ of it = $\frac{1}{2}$ of it.



7. Color this rectangle to show that $\frac{4}{8}$ of it = $\frac{1}{2}$ of it.



8. Color this rectangle to show that $\frac{6}{8}$ of it = $\frac{3}{4}$ of it.



9. Here are three plates with pieces of apple pie left on each. When the pies were whole, each pie was cut into _____ equal parts.

If the pieces that are left were all put on one plate, would there be as much as a whole pie? _____

10. Nancy had $\frac{1}{2}$ lb. of butter. She used some. Now she has only $\frac{1}{4}$ lb. left. What part of a pound did she use? _____

11. Marie asked the grocer for $\frac{3}{4}$ lb. of cheese. He cut off a piece and put it on the scale. He said, "This piece weighs 13 oz. Will that be all right?"

Marie said, "Yes, I'll take it."

Marie got _____ oz. more than she asked for.

12. Draw lines of these lengths. The first one is drawn for you.

$1\frac{1}{4}$ in. _____

$1\frac{1}{2}$ in.

$\frac{3}{4}$ in.

$2\frac{1}{4}$ in.

$2\frac{3}{4}$ in.

Choosing Correct Answers

Three answers are given to each of these questions. Only one answer is correct. Draw a line around it.

1. How many minutes are there in $2\frac{1}{2}$ hours?

250 150 90

2. What change would you get from a $10.00 bill after buying a pair of shoes for $3.95?

$7.05 $6.05 $6.95

3. $4.05 is worth how many cents?

405 450 4005

4. What is the sixth month of the year?

May June July

5. Which of these means quarter of nine?

9:15 9:45 8:45

6. How many ounces are there in $\frac{7}{8}$ lb.?

7 14 2

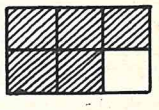
7. How much is 20×40?

80 800 8000

8. How much is $4908 \div 7$?

71 r1 7001 r1 701 r1

9. What part of this rectangle is shaded?



$\frac{5}{8}$ $\frac{5}{6}$ $\frac{1}{6}$

10. What is the average of 72, 64, 80, and 96?

80 68 78

11. How much is $\frac{1}{8}$ of 672?

74 84 83

12. At 3 for a dollar, how much will a dozen blackberry bushes cost?

$3.00 $4.00 $12.00

WORK SPACE

1. Mrs. Clark wants to buy a new overcoat for each of the twins, Bob and Dick. The coats cost $12.98 apiece. The multiplication in the box shows that 2 coats will cost _____.

$12.98
× 2
$25.96

Explain the multiplication.

Multiply. Check by going over your work.

	a	*b*	*c*	*d*	*e*
2.	$29.18 × 9	$20.34 × 7	$78.34 × 6	$91.09 × 8	$35.40 × 5
3.	$76.28 × 8	$38.27 × 9	$13.05 × 7	$91.25 × 6	$46.35 × 5
4.	$27.06 × 5	$30.07 × 8	$47.36 × 9	$94.20 × 7	$90.06 × 6
5.	$62.10 × 6	$18.27 × 5	$84.60 × 8	$56.45 × 9	$85.16 × 7
6.	$70.98 × 5	$53.97 × 6	$76.97 × 7	$68.55 × 8	$65.54 × 9
7.	$54.89 × 4	$67.08 × 7	$40.78 × 6	$74.63 × 9	$79.64 × 8
8.	$45.89 × 7	$67.18 × 3	$83.72 × 9	$12.73 × 8	$90.19 × 5
9.	$70.01 × 6	$12.81 × 9	$38.02 × 8	$56.89 × 6	$56.94 × 2
10.	$10.90 × 9	$45.91 × 8	$39.27 × 4	$21.06 × 3	$78.35 × 4

1. If you know the trick, you can figure out these answers in less than a minute.

$2875 - 346 + 346 =$ _____
$3568 - 289 + 289 =$ _____
$7402 - 567 + 567 =$ _____
$3846 - 1872 + 1872 =$ _____

2. Can you write these answers in less than a minute?

$9 \times 6 \div 6 =$ _____
$56 \times 8 \div 8 =$ _____
$275 \times 9 \div 9 =$ _____
$407 \times 7 \div 7 =$ _____
$682 \times 5 \div 5 =$ _____

3. The answers to these four examples will interest you.

$9 \times 9 + 7 =$ _____
$9 \times 98 + 6 =$ _____
$9 \times 987 + 5 =$ _____
$9 \times 9876 + 4 =$ _____

4. If you know the trick, you can figure out these answers in less than a second.

$9 \times 7 \times 6 \times 5 \times 4 \times 0 =$ _____
$2 \times 6 \times 4 \times 0 \times 1 \times 9 =$ _____

5. Choose a number from 1 to 9. Multiply the number by 9. Write the product here: _____

Now multiply the number in the box below by the product you wrote above. You will be surprised at your answer.

1 2 3 4 5 6 7 9
_____ ×

In the boxes below try the trick in Ex. 5 over again. Choose a different number each time. It must be between 1 and 9. Multiply the number in each box below by 9 times the number you have chosen.

6. 1 2 3 4 5 6 7 9
_____ ×

7. 1 2 3 4 5 6 7 9
_____ ×

WORK SPACE

Review Practice

Add and check.

	a	*b*	*c*	*d*	*e*	*f*
1.	27 84 30	75 80 64	95 76 82	74 69 87	95 43 28	$.76 .65 .48
2.	473 28 254	563 275 89	74 356 287	465 287 963	458 794 328	$6.54 5.09 8.73
3.	468 27 95 763	476 824 98 705	638 274 97 86	564 287 904 56	387 249 563 284	$7.68 2.54 9.67 8.23
4.	78 24 67 83 95 64	95 36 82 70 43 20	128 46 95 240 87 23	356 49 82 47 963 20	468 273 94 86 207 93	$7.24 2.63 4.80 .94 .28 3.00

Subtract and check.

5.	876 293	478 394	605 287	963 485	278 86	$4.98 .79
6.	500 246	800 357	900 178	600 329	700 405	$9.00 1.75
7.	2875 1963	4780 2600	5000 2897	6000 1784	7689 6982	8763 5628

Review Practice

Multiply. Check by going over your work.

	a	*b*	*c*	*d*	*e*
1.	278 × 5	689 × 4	547 × 60	423 × 40	$46.90 × 8
2.	75 × 64	86 × 72	90 × 63	48 × 76	$.94 × 89
3.	287 × 463	564 × 879	208 × 764	574 × 208	$3.84 × 209

Divide. Check on a separate sheet of paper.

4.	6)379	8)695	7)543	9)524	6)$5.04
5.	8)7264	9)8172	6)4806	7)6302	8)$56.16
6.	6)3894	7)5395	8)5572	9)8784	5)$37.85

1. Four girls picked blackberries and sold them for 80¢. If they share the money equally, each girl will get _____¢.

2. Tom paid 5¢ for a bag of peanuts. There were 20 peanuts in the bag. Tom said, "These peanuts sell at the rate of _____ for a cent."

3. 4 weeks and 2 days = _____ days.

4. 31 days = _____ wk. and _____ days.

5. The date a year ago today was _____ _____, _____.

6. If candy bars are selling at 3 for a dime, 9 bars will cost _____¢.

7. June opened a can of apricots. There were 16 halves of apricots in it. That was the same as _____ whole apricots.

8. Find the cost of 30 newspapers at 3¢ each. _____

9. Find the average of 3, 5, 6, and 2. _____.

10. Tom's father rides to work on the bus 6 days a week. He uses 2 bus tickets a day. The tickets cost 2 for 15¢. His bus rides cost _____¢ a week.

11. Peter has a dollar. If he spends 65¢, he will have _____¢ left.

12. Find the cost of $\frac{3}{4}$ yd. of cord at 16¢ a yard. _____

13. Shirley wants a pound of salted peanuts. They come in 4-oz. bags and sell at 20¢ a bag. A pound of peanuts will cost _____¢.

14. Find the cost of a pound and a half of fish at 20¢ a pound. _____¢

15. Danny has a walking clown. Danny wound it up and timed it. It went for 2 minutes before it "ran down," and in that time took 20 steps. Danny said, "This clown walks at the rate of _____ steps a minute."

16. If plums are sold at 3 for a nickel, for a quarter you can get _____ plums.

17. Anne's fruit-pudding recipe calls for $\frac{3}{4}$ lb. of raisins. Anne bought a box of raisins marked: Net weight: 14 oz. Anne got _____ oz. more than she needs for the pudding.

18. How many 5-cent pencils can you buy for 45¢? _____

Write the missing word in each sentence. Write the word *add*, *subtract*, *multiply*, or *divide*.

1. Polly knows how much money she has. She knows how much a pair of skates costs. To find how much more money she needs, she should _____.

2. Shirley knows the cost of a raincoat, a pair of boots, and an umbrella. To find the cost of all, she should _____.

3. Tom knows how many rows of seats there are in the school assembly hall, and how many seats there are in each row. To find how many seats there are in all, he should _____.

4. Grace knows how many new dining-room chairs her mother bought. She knows how much one chair cost. To find the cost of all the chairs, she should _____.

5. Tom knows how much a piece of track for his electric train costs. He knows how much money he has. To find how many of those pieces of track he can buy, he should _____.

6. Ann knows how old she is. She knows how old her father is. To find how old her father was when she was born, she should _____.

7. Billy knows how much he paid for a box of tennis balls. He knows how many balls are in the box. To find the cost of each ball, he should _____.

8. Peter knows how much money he gave the clerk when he bought a notebook. He knows how much change he got back. To find how much the clerk charged him for the notebook, he should _____.

9. Patsy knows how many pot holders she can knit out of one ball of cord. She knows how many pot holders she wants to make. To find how many balls of cord to buy, she should _____.

10. Peter knows how many hours he has been on the bus. He knows how many miles an hour the bus travels. To find how far he has traveled on the bus, he should _____.

11. Harry knows how many gallons of milk his cow gives each day. To find how many quarts she gives, he should _____.

1. 1 ft. = _____ in.
   1 yd. = _____ ft.
   1 yd. = _____ in.
   1 mi. = _____ ft.

2. 1 lb. = _____ oz.
   1 T. = _____ lb.
   $\frac{1}{4}$ lb. = _____ oz.
   $\frac{3}{4}$ lb. = _____ oz.

3. 1 min. = ____ sec.
   1 hr. = ____ min.
   1 da. = ____ hr.
   1 wk. = ____ da.

4. 1 yr. = _____ mo.
   1 yr. = _____ wk.
   1 yr. = _____ da.
   1 leap year = _____ da.

5. 1 pt. = ____ glasses
   1 qt. = ____ pt.
   1 qt. = ____ glasses
   1 gal. = ____ qt.

6. 1 pr. = ____ things
   1 doz. = ____ things
   $\frac{1}{2}$ doz. = ____ things
   $\frac{1}{4}$ doz. = ____ things

7. $\frac{1}{4}$ yd. = ____ in.
   $\frac{1}{2}$ yd. = ____ in.
   $\frac{3}{4}$ yd. = ____ in.
   $\frac{5}{6}$ yd. = ____ in.

8. $\frac{1}{2}$ mi. = _____ ft.
   $\frac{1}{4}$ mi. = _____ ft.
   $\frac{3}{4}$ mi. = _____ ft.
   $\frac{1}{3}$ yd. = _____ ft.

9. $\frac{1}{4}$ T. = _____ lb.
   $\frac{1}{2}$ T. = _____ lb.
   $\frac{3}{4}$ T. = _____ lb.
   $\frac{1}{2}$ lb. = _____ oz.

10. $\frac{1}{4}$ hr. = ____ min.
    $\frac{1}{2}$ hr. = ____ min.
    $\frac{3}{4}$ hr. = ____ min.
    4 hr. = ____ min.

11. 2 yr. = ____ mo.
    $\frac{1}{2}$ yr. = ____ mo.
    $\frac{1}{3}$ yr. = ____ mo.
    $\frac{2}{3}$ yr. = ____ mo.

12. $\frac{1}{2}$ ft. = ____ in.
    $\frac{1}{6}$ ft. = ____ in.
    $\frac{5}{6}$ ft. = ____ in.
    $\frac{3}{4}$ ft. = ____ in.

13. 2 wk. = ____ da.
    6 wk. = ____ da.
    8 wk. = ____ da.
    10 wk. = ____ da.

14. 4 qt. = ____ pt.
    4 pt. = ____ qt.
    8 gal. = ____ qt.
    8 qt. = ____ gal.

15. $\frac{1}{6}$ yr. = ____ mo.
    $\frac{5}{6}$ yr. = ____ mo.
    $\frac{3}{4}$ yr. = ____ mo.
    $\frac{2}{3}$ yr. = ____ mo.

16. $\frac{1}{6}$ doz. = ____ things
    $\frac{5}{6}$ doz. = ____ things
    $\frac{3}{4}$ doz. = ____ things
    $\frac{2}{3}$ doz. = ____ things

17. $\frac{1}{6}$ hr. = ____ min.
    $\frac{5}{6}$ hr. = ____ min.
    $\frac{1}{3}$ hr. = ____ min.
    $\frac{2}{3}$ hr. = ____ min.

18. $\frac{1}{6}$ yd. = ____ in.
    $\frac{5}{6}$ yd. = ____ in.
    $\frac{1}{3}$ yd. = ____ in.
    $\frac{2}{3}$ yd. = ____ in.

Problem Test VIII

1. If 2 cans of tomato soup cost 29¢, a half-dozen cans will cost _____.

2. John is paid 40¢ an hour. Today he worked $3\frac{3}{4}$ hr. He earned _____ today.

3. Flying at the rate of 200 miles an hour, a plane can go _____ miles in $2\frac{1}{2}$ hours.

4. If you buy $\frac{3}{4}$ lb. of meat at 36¢ a pound and hand the clerk a dollar bill, how much change will you receive?

_____

5. 100 paintbrushes at 15¢ each will cost _____.

6. Six boys together earned $4.50 for spading a garden. If they share the money equally, each will get _____.

7. John took a book out of the library on May 2. He returned it May 30. He kept the book out _____ weeks.

8. Mary wants to buy a 29-cent package of frozen peas and a 28-cent jar of apple butter. She has a half dollar. She needs _____ more.

9. The average of 13, 18, 24, 27, and 33 is _____.

10. Ted is buying a bicycle. He is paying $15.00 today and $.75 a week for 18 weeks. Ted will pay _____ in all.

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.

I have _____ answers correct.

My work is excellent (10) good (8–9) fair (6–7) poor (1–5)

1. $24 + 20 =$ ____ $75 + 12 =$ ____
$65 + 30 =$ ____ $42 + 31 =$ ____
$47 + 21 =$ ____ $53 + 31 =$ ____
$53 + 40 =$ ____ $47 + 21 =$ ____

2. $18 + 7 =$ ____ $36 + 8 =$ ____
$28 + 5 =$ ____ $54 + 7 =$ ____
$49 + 6 =$ ____ $72 + 6 =$ ____
$48 + 4 =$ ____ $56 + 6 =$ ____

3. $51 - 48 =$ ____ $52 - 45 =$ ____
$60 - 54 =$ ____ $41 - 35 =$ ____
$40 - 36 =$ ____ $33 - 28 =$ ____
$53 - 49 =$ ____ $21 - 16 =$ ____

4. $4 \times$ ____ $= 36$ $8 \times$ ____ $= 48$
$7 \times$ ____ $= 56$ $7 \times$ ____ $= 49$
____ $\times 9 = 54$ ____ $\times 9 = 81$
____ $\times 7 = 42$ $8 \times$ ____ $= 64$

5. $\frac{1}{5}$ of 45 = ____ $\frac{2}{5}$ of 45 = ____
$\frac{1}{6}$ of 42 = ____ $\frac{5}{6}$ of 42 = ____
$\frac{1}{8}$ of 48 = ____ $\frac{7}{8}$ of 48 = ____
$\frac{1}{9}$ of 63 = ____ $\frac{5}{9}$ of 63 = ____

6. $76 \div 9 =$ ____ and ____ over
$57 \div 6 =$ ____ and ____ over
$53 \div 8 =$ ____ and ____ over
$41 \div 7 =$ ____ and ____ over
$42 \div 9 =$ ____ and ____ over

7. Write these numbers in figures.
Three hundred thousand _____
Two thousand, sixty _____
Forty thousand, nine _____

8. Count by halves from $\frac{1}{2}$ to $3\frac{1}{2}$
$\frac{1}{2}$ 1 $1\frac{1}{2}$ ____ ____ ____ $3\frac{1}{2}$

9. 9 balls at 8¢ each cost _____.

10. How many 6-cent apples can you get for a half dollar? _____

11. 37 is _____ more than 20.

12. Does 3 times 25¢ equal $1.25?
_____

13. 1 yr. = ____ wk. 1 yr. = ____ da.

14. $\frac{3}{4}$ hr. = ____ min. 1 T. = ____ lb.

15. 1 lb. = ____ oz. $\frac{1}{2}$ yd. = ____ in.

16. 1 yr. = ____ mo. $\frac{3}{4}$ yd. = ____ in.

17. 2 ft. 3 in. = ____ in.

18. 3 ft. 5 in. = ____ in.

19. 4 ft. 4 in. = ____ in.

20. $10 \times 62¢ =$ ____¢ = $\$$____

21. $10 \times 75¢ =$ ____¢ = $\$$____

22. $20 \times 32¢ =$ ____¢ = $\$$____

23. Take the tests on pages 3, 7, 70, and 71 again today.

Review Practice

1. $\$4.67 + .89 + .72 + 3.46 + .35 + .97$ = _____

   $\$5.63 + 2.84 + .95 + .08 + 7.64 + 2.59$ = _____

   $\$5.64 + 3.08 + 9.27 + .45 + .79 + 6.55$ = _____

2. $500 - 187$ = _____

   $\$7.05 - 2.38$ = _____

   $\$45.62 - 28.79$ = _____

3. $100 \times 24¢$ = _____¢ = $_____

4. 705×6 = _____

   $\$6.54 \times 8$ = _____

   $\$27.65 \times 9$ = _____

5. 35×86 = _____

   275×406 = _____

   356×284 = _____

6. $7\overline{)294}$ = _____

   $6\overline{)\$5.70}$ = _____

   $5\overline{)254}$ = _____

Progress Test VIII

1. $\frac{5}{8}$ of 56 = _____

2. $\frac{5}{6}$ yd. = ____ in.

3. $\$75.64 \times 4$ = _____

4. $2\frac{1}{2} \times 20$ = ____

5. Jane knows how much one basket of pansies costs. She knows how many baskets she wants to buy. To find how much her bill will be, she should _____.

6. Would 4 books priced at $4.98 each cost about $16.00 or about $20.00? _____

7. Draw a line around the fraction that equals one half: $\frac{1}{4}$ $\frac{4}{8}$ $\frac{2}{3}$

8. $\frac{3}{4}$ lb. of fish at 36¢ a pound costs _____.

9. Harry can hoe 8 rows of corn in an hour. In $2\frac{1}{4}$ hr. he hoes ____ rows.

10. Eight boys in the Drum Corps need new uniforms. The uniforms cost $12.50 each. How much will the 8 uniforms cost? _____

8. _____

9. _____

10. _____

Number of answers correct: _____ Date: _____ _____, _____

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